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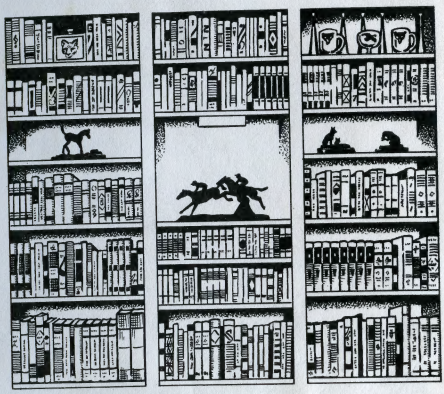

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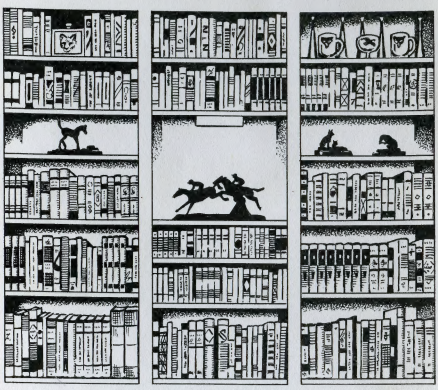

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JOHN AND MARTHA DANIELS

Front view of the Internal or sensible Foot.

Published Mar. 22, 1802, by J. Badcock Pater noster Row.

A

COMPENDIUM

OF THE

VETERINARY ART;

CONTAINING

AN ACCURATE DESCRIPTION

OF ALL

THE DISEASES TO WHICH THE HORSE IS LIABLE,

THEIR

SYMPTOMS AND TREATMENT;

THE

ANATOMY AND PHYSIOLOGY

OF THE

HORSE's FOOT;

OBSERVATIONS

ON THE PRINCIPLES AND PRACTICE OF

SHOEING;

ON FEEDING AND EXERCISE, THE STABLE, &c.

Illustrated by Plates.

DEDICATED, BY PERMISSION,

TO

His Royal Highness the Duke of York.

By JAMES WHITE,

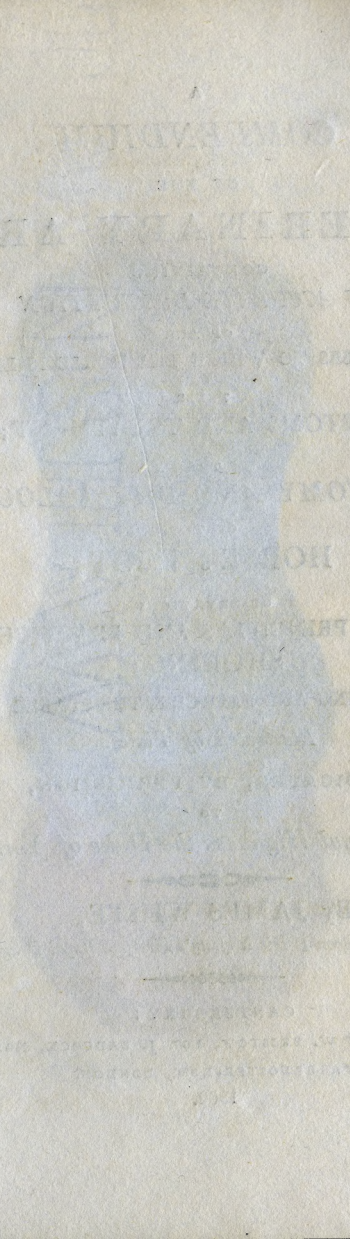
Veterinary Surgeon to His Majesty's First, or Royal Dragoons.

CANTERBURY:

PRINTED BY W. BRISTOW, FOR J. BADCOCK, NO. 28,

PATERNOSTER-ROW, LONDON.

1802.



TO HIS

Royal Highness Field Marshal

THE

DUKE OF YORK, K. G.

COMMANDER IN CHIEF

OF HIS MAJESTY's FORCES,

&c. &c. &c.

SIR,

YOUR Royal Highness's gracious condescension in having extended your patronage and sanction to this small treatise, is a convincing proof that no

attempt to render service to our military establishment passes unnoticed, and that the cause of humanity will ever find in your Royal Highness a most ready protector. The following observations have been suggested by considerable experience, arising from the nature of the service in which, for several years, I have had the honor to be employed by his Majesty, and have been collected with caution and industry, under the hope (which cannot now but become more sanguine) that they may not be found wholly inadequate to promote the purposes for which they were intended.

I am, with the most profound respect,

Sir,

Your Royal Highness's

Most devoted, obliged,

And humble servant,

J. WHITE,

Vet. Surg. Royal Dragoons.

PREFACE.

In the Author's first attempt to communicate to the Public the result of his experience in the Veterinary Art, the principal object of the work was to improve the very imperfect method of shoeing which commonly prevails, and thereby preserve the feet of Horses from the numerous disorders to which they have hitherto been subject; at the same time it was thought necessary to add a concise description of the diseases which most commonly occur, and point out the most effectual means for removing them.

The favourable manner in which that book was received by the public, evinced by its rapid sale, has induced the author to revise it very carefully, and as several of the less important diseases were omitted for the purpose of keeping the book within a certain size, they have all been included in the present edition. There has been added also an anatomical description of the internal parts of the body, which will enable the reader to comprehend with greater facility than he other-

wise would the nature of their diseases. All the important disorders have been more minutely described than in the former book, and a variety of useful formulæ given; some observations have also been added on the subject of Condition and the General Management of the Stable; in short, the Author has endeavoured to make the book as useful as possible to such as are concerned in the management of Horses.

CANTERBURY, April 24, 1802.

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Explanation of the Plates.

Plate 1, Fig. 1, A Colt's Hoof in a state of Nature —*a* the Frog, *bb* the Bars, *c* the Sole, *d* the Heels.

Fig. 2, A Hoof prepared for the Shoe—*a* the Frog, *bb* the Bars, *c* the Sole, *d* the junction of the Bar and Crust, which has been rasped flat that the Heel of the Shoe may have a firm bearing upon it; *e* the cavity between the Bar and Crust, which is to be made with a drawing knife, in order to prevent the Shoe from pressing on that part, and occasioning Corns.

Plate 2, Fig. 1, A Hoof prepared in the common way, in which the Frog has been deprived of its hard surface, the Bars removed, and great part of the Sole cut away—*a* the Frog, *b* the Sole.

Fig. 2, A contracted Hoof.

Plate 3, Fig. 1, A sound Hoof properly shoed.

Fig. 2, A Hoof shoed in the common way.

Plate 4, Fig. 1, A side view of the sound Hoof, with a scale, shewing the proper degree of obliquity—*a* the Quarter, *b* the Heel, *d* the Toe.

Fig. 2, A side view of a Convex or Pummice Foot, in which the Hoof always loses its natural form, and approaches the horizontal line.

Fig. 3, A bottom view of the same subject, in which the convexity of the Sole may be observed.

Plate 5, Fig. 1, The Concave Shoe for Feet, where the Soles are flat or convex.

Fig. 2, The Bar Shoe, for tender Frogs.

Fig. 3, The Shoe for a sound Foot.

Plate 6, Fig. 1, A front view of the Internal or Sensible Foot—*aa* the sesamoid Bones, *b* the laminated substance, *c* the Coronary Ring.

Fig. 2, A bottom view of the Sensible Foot—*a* the Sensible Frog, *b* the Sensible Sole.

Plate 7, The internal surface of the Hoof and Sole—*a* the laminated substance, *b* the groove for the Coronary Ring, *c* the internal surface of the horney Sole, *d* the internal surface of the horney Frog.

Plate 8, A Section of the Foot—*a* part of the large Pastern Bone, *b* the small Pastern, *c* the Coffin-Bone, *d* the Navicula or Nut-Bone, *e* the Frog, *f* the Sole, *g* the Crust, the red line between the Crust and Coffin-Bone, represents the laminated substance; *hi* the Flexor Tendon or Back Sinew, *ik* the fatty, elastic substance between the Frog and back Sinew.

Plate 9, A front view of the Bones, Ligaments and Tendons—*aa* the sesamoid Bones, *bbb* the extensor Tendon, *c* the front of the Coffin-Bone, where it is fixed or inserted, *dd* the Toe of the Coffin-Bone.

Plate 10, A back view of the same subject—*aaa* the back Sinew, *b* its sheath, *cc* the lateral Cartilages, *d* the bottom of the Coffin-Bone.

Plate 11, The same subject, the Tendons having been removed in order to shew the Ligaments that lie immediately under them—*a* the smooth surface over which the back sinew passes, *b* the ligament which encloses the back Sinew, forming a sheath for it, and keeping it in its situation; in this preparation some part of the ligament was removed, in order to shew the smooth surface *a*: *ddd* a ligament going from the sesamoid Bones to the small Pastern; its use seems to be

that of giving strength to the Pastern joint, which, from the oblique position of the Pastern Bones, would otherwise have been very insecure. I believe this ligament is sometimes broken in violent strains, or when a Horse is said to be broken down.

Plate 12, A front view of the Bones—*aa* the sesamoid Bones, *b* the large Pastern, *c* the small Pastern, *d* the Coffin-Bone.

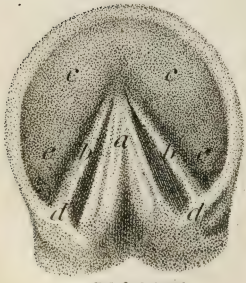
Plate 13, A back view of the Bones—*aa* the sesamoid Bones, *b* the large Pastern, *c* the small Pastern, *d* the Navicula or Nut-Bone, *e* the bottom of the Coffin-Bone.

Plate 14 represents a Frost Shoe. This Shoe is designed for slippery roads, and on such occasions renders a Horse perfectly secure, the sharp wedge-like substance at the Heel being merely screwed into the Shoe, may be removed and applied again at pleasure—*a* the Shoe complete, *b* the female screw in the Heel, *c* the wedge that screws into it, *d* its screw, *e* the key for fixing and removing the wedge.

Plate 1.

Fig. 1.

Fig. 2.



Neele fc. 352 Strand

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Plate 2nd

Fig. 1.

Fig. 2.

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Fig. 1.

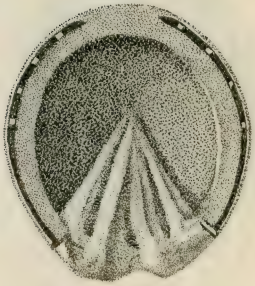


Fig. 2.

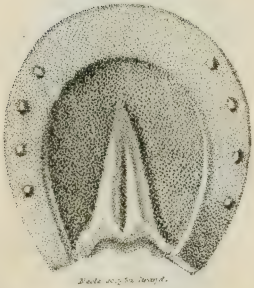
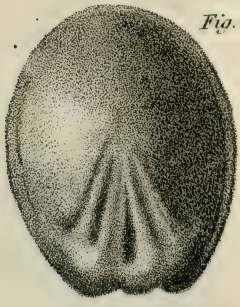


Fig. 3.



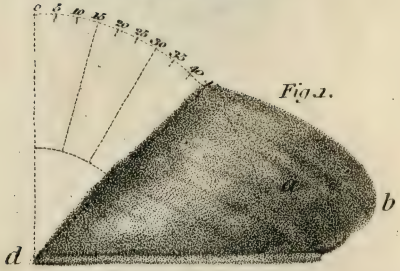
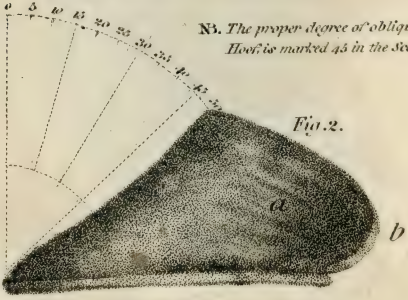


Fig. 1.



N.B. *The proper degree of obliquity in the Hoof is marked 45 in the Scale.*

Fig. 2.

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Plate 5th

Fig. 1.

Fig. 2.

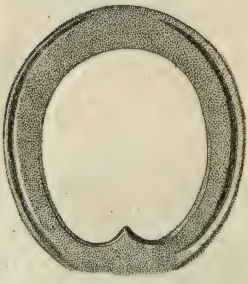

Fig. 3.

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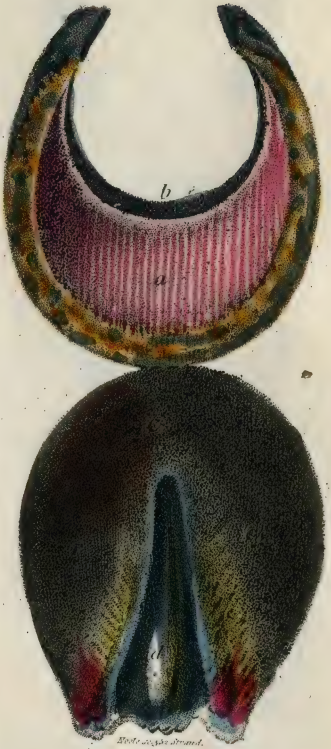
Plate 7th.



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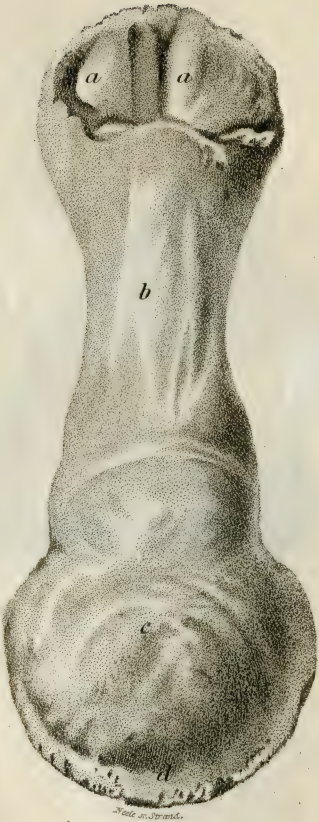
Published March, 22, 1809, by J. Badcock, Pater noster Row.

Neale sc. Strand



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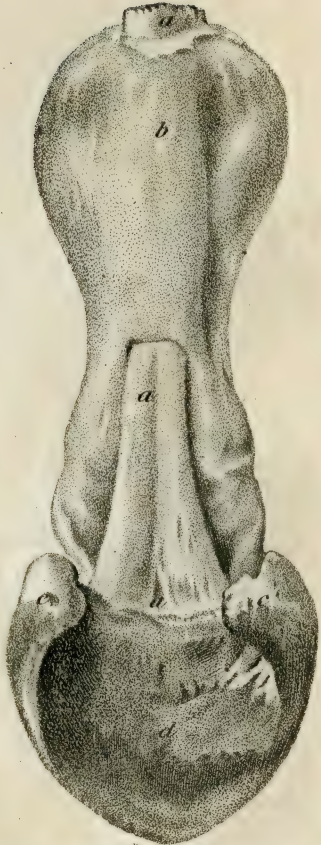

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Plate 11th.

Neele sc. 352 Strand.

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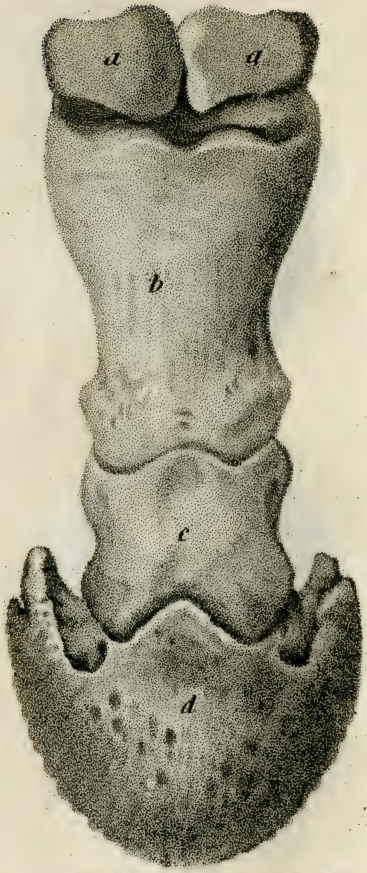

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Plate 13th

Neale sc. 362 Strand.

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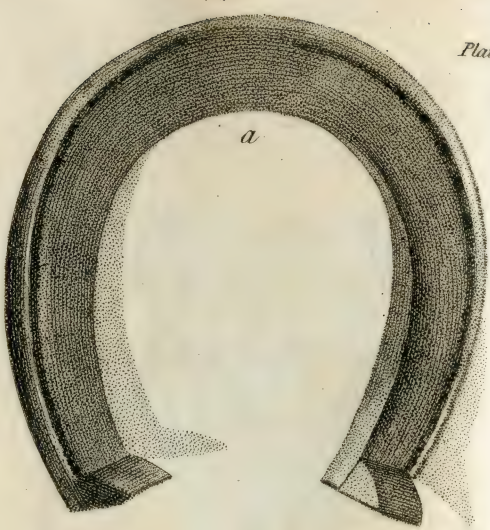
Plate 14



Published March 2, 1802, by J. Badcock, Paternoster Row.

Neele sc Strand

COMPENDIUM

OF THE

VETERINARY ART, &c.

CHAPTER I.

THERE is scarcely a disease to which the Horse is liable, that will not appear upon a strict examination either to consist in, or to be a consequence of inflammation, which, when it attacks any of the internal organs, gives rise to his most dangerous diseases: thus an inflamation of the Lungs, Bowels, or any of the internal parts, will produce that kind of derangement in the system which is termed a fever, the violence of which will be proportioned to the degree and extent of the inflammation, and the importance of the inflamed organ in the animal œconomy. It appears necessary therefore as an introduction to this work, to give a

sketch of the anatomy of those internal organs, and to point out the various functions they perform, after which it will be proper to give a general description of inflammation with its different modes of termination.

Structure and Functions of the Internal Organs

The hollow part of the body is divided into two cavities by a strong muscular partition termed *Diaphragm* or Midriff; the anterior part is named *Thorax* or Chest; and the posterior *Abdomen* or Belly. The Thorax contains the *Lungs* and *Heart*; the Abdomen the *Stomach*, *Intestines*, *Liver*, *Spleen* or Melt, *Pancreas* or Sweet-bread, *Kidneys* and *Bladder*.

OF THE LUNGS.

In describing the Lungs it is necessary to begin with the *Trachea* or Windpipe, which is a cylindrical cartilaginous tube, extending from the Throat to the Chest; the Trachea is not made up of one entire cartilage, but of several cartilaginous rings, which are united by strong membranes, and such is the elasticity of these cartilages that the tube is enabled to preserve

its cylindrical form, even when it receives considerable pressure, and thereby afford free ingress and egress to the air in respiration. The upper part of the Trachea is composed of stronger cartilages than the other parts of the tube, and is termed *Larynx*; to this is connected a curious kind of valve, called *Epiglottis*, which is always open, except in the act of swallowing, it is then forced down upon the Larynx so as to prevent food, or any thing which may be passing over the throat, from falling into the Windpipe: when the Trachea arrives at the Chest, it divides into numerous branches, which gradually becoming smaller, at length terminate in minute cells; the Lungs indeed are made up of the ramifications of the Trachea and Blood-vessels; the interstices being filled with cellular membrane, which serves not only to unite them, but likewise to give an uniform and homogeneous appearance to the whole mass. The Lungs are covered with a fine delicate membrane called the *Pleura*, which also covers the internal surface of the Ribs and Diaphragm, and by stretching across the chest from the Spine to the Breast-bone, divides the Thorax into two cavities; this part of the Pleura is therefore named *Mediastinum*. On every part of the Pleura an aqueous fluid is secreted for the purpose of preventing a

cohesion of the parts, and when this is produced too abundantly, it constitutes the disease termed Hydrothorax or Dropsy of the Chest. The Lungs are divided into two parts, one of which is situated in each cavity of the Thorax; this division seems to have been provided in case of accidents, it having been proved that when one Lung has been incapable of performing its function in consequence of injury or disease, the other has been found adequate to the support of life.

The Lungs are the organs of respiration or breathing, but they do not appear to be *actively* concerned in the performance of this office; when the Diaphragm and the Muscles of the Belly and Ribs contract, the cavity of the Thorax is considerably diminished, and the Lungs so compressed, that all the air contained in them is forced out through the Windpipe; when this has been effected, the Muscles relax, and the Thorax returns to its original size; there would now be a vacuum between the internal surface of the Ribs, and the external surface of the Lungs, did not the air rush in through the Windpipe, and so distend its branches and cells as to make the Lungs completely fill the cavity; thus are the Lungs constantly employed in inspiration and expiration, and this process,

which we call breathing, is carried on by the combined action of the Diaphragm, and the Muscles of the Ribs and Abdomen.

OF THE HEART.

The Heart is placed nearly in the middle of the Thorax, it is rather conical in its form; the apex inclining towards the left side. The Heart is divided into two cavities, termed *Ventricles*, each of them having a small hollow appendage, which from a slight resemblance it bears to a dog's ear, has been named *Auricle*. When the left Ventricle is full of blood, it contracts so powerfully as to force its contents into the *Aorta* or grand Artery, by which the blood is distributed all over the Body; it is then taken up by the *Veins*, and conveyed by them to the *right Auricle*, whence it flows into the *right Ventricle*; this also, when it is sufficiently distended, contracts upon its contents and propels the Blood into the *Pulmonary Artery*, by which it is conveyed to every part of the Lungs. The *Pulmonary Veins* then receive it, and convey it to the *left Auricle*, from whence it is propelled into the *left Ventricle*, that it may again be distributed by the *Aorta* to every part of the Body.

—The Blood is thus continually circulating through the Body, and this process may be considered as one of the most important actions that is performed in the animal machine; if it be stopped for a few seconds all motion is suspended, and if it be prevented a longer time from going on, vitality is destroyed. The function of the Lungs is of equal importance in the animal œconomy, and cannot be stopped even for a short time, without suspending or totally destroying animation. Ancient Physiologists had a very imperfect idea of the manner in which those organs so essentially contributed to the support of life; the Moderns, however, have been more successful in their researches, they have discovered that the blood derives from the air which is taken into the Lungs, the most important properties, without which it would be an useless vapid mass, totally inadequate to the purposes for which it was designed. If we examine the blood in the *left Ventricle* of the Heart, and in the Arteries, it will be found of a bright scarlet colour, and replete with those properties which render it capable of nourishing the Body, and stimulating the whole system to action: in the *Veins* it becomes of a much darker colour, and when it arrives at the *right Ventricle* is nearly black, and destitute of those

enlivening qualities which it possessed when in the *left Ventricle*: had not the Deity then provided some means for its renovation, it would have been quite unfit for a second circulation, and the duration of life must have been short indeed; but from the *right Ventricle* it is conveyed by the Pulmonary Artery to the Lungs, at the moment they are distended with air; here the Blood undergoes a wonderful alteration, it resumes its bright scarlet colour, and is returned by the Pulmonary Veins to the *left* side of the Heart, with all it original and essential qualities restored to it.

Hence we may learn how important are the functions of respiration and circulation of Blood, how essential to the life of animals, and how dependant they are on each other.

VISCERA OF THE ABDOMEN.

Having finished our description of the Thoracic Viscera, we shall proceed to notice those of the *Abdomen* or Belly; the first and most important of which is the *Stomach*. Whatever this organ receives, is conveyed to it by a long muscular tube, named *Æsophagus* or Gullett; the Æsophagus originates in the Throat, where its

size is considerable, but it suddenly diminishes into a small tube, and is continued of the same size to the Stomach; this upper part has been thought to resemble a funnel in its form, and is distinguished by the term *Pharynx*.

The Æsophagus having passed along the Throat and back part of the Chest, penetrates through the Diaphragm, and terminates in the Stomach.

The Æsophagus of a Horse has on its internal surface an insensible membrane, which stretches into the Stomach, and lines nearly one half of it; this peculiarity of structure enables us to account in some measure for the inactivity of many violent poisons when given to the Horse. In the human Æsophagus this membrane does not exist, the whole of its internal surface, as well as that of the Stomach, being exquisitely sensible.

If two grains of Emetic Tartar are swallowed by a man, it soon occasions violent vomiting, whereas two hundred times that quantity would produce no sensible effect upon the Horse. At the Cardiac Orifice, or that part where the Æsophagus enters the Stomach, its internal coat is so loose as to be thrown into folds, appearing as if it were designed as a valve to prevent the regurgitation of the contents of the Stomach;

from this cause, as well as from the insensibility of the membrane, with which great part of the Stomach is lined, a Horse very rarely vomits, but the opinion that he is totally incapable of that action, is certainly not true, as I have once seen a Horse vomit very considerably.

When we examine the Throat of a Horse, another valvular structure is observed, which is formed by the *Epiglottis* or valve of the Windpipe, and a membranous substance that hangs from the back part of the roof of the mouth, and is peculiarly large in the Horse, termed *Velum Pendulum Palati*; these bodies form a very complete valve, which opens downwards only, thereby preventing the return of any thing through the *Mouth*, either from the Lungs or Stomach: thus we find that a Horse breathes only through his *Nose*, except in coughing, by which the valve is so deranged as to allow the air, which is thrown out from the Lungs, to pass through the Mouth.

In the case of vomiting I have just mentioned, the contents of the Stomach were at first observed to pass through the Nose, at length, by a violent cough, the valve was deranged, and a considerable quantity of fluid, mixed with masticated hay and oats, was evacuated by the mouth.

That part of the Stomach where the Æsophagus terminates, is called the Cardiac Orifice, and that where the intestines begin, is termed Pylorus.

The Intestines or Bowels consist of one very long tube, which terminates at the Anus.

In the Horse the Intestines measure nearly thirty yards, but being convoluted in order to adapt them to the cavity in which they are placed, they have the appearance of several distinct parts.

The internal surface of a Horse's Intestines are not lined with that insensible membrane which is found in the Æsophagus and upper part of the Stomach, on the contrary it is endued with a high degree of sensibility, and appears to be more susceptible of irritation than that of most other animals; from this irritability of the Intestines, many Horses have been destroyed by the administration of strong purgatives, and hence arises the necessity of using those medicines with skill and caution.

The Intestinal tube is not throughout its whole extent of an uniform size; that part next the Stomach is rather small, and continues for about fifteen yards nearly of the same diameter, it then becomes very large, but again diminishes before it terminates in the Anus.

Anatomists in describing the Intestinal canal, divide it into two parts, viz. the small and the large Intestines; these are subdivided, the former into *Duodenum*, *Jejunum*, and *Ileum*; the latter into *Cœcum*, *Colon*, and *Rectum*.

All the internal surface of the Intestinal tube is covered with a mucœus substance, for the purpose of defending it from the action of acrimonious bodies. The various convolutions of the Intestines are held together by a membrane called *Mesentery*, which not only serves this purpose, but affords also a bed for the *Lacteals*, or those small vessels by which the nutritious parts of the food are conveyed to the heart to be converted into blood; but before we give a particular description of those vessels, it will be necessary to describe the process of nutrition.

When food is taken into the Mouth, it is broken down by the Teeth, and so mixed with saliva, as to be in a proper state for entering the Stomach; it is then by the united action of the Tongue and Muscles of the Throat forced into the Æsophagus, whence it passes into the Stomach; in this organ it undergoes a considerable alteration, for here nature has provided a curious liquid, called gastric juice, which has the property of dissolving every thing that is taken into the Stomach, and of converting it into a

soft pulpy mass, of an uniform and homogeneous appearance; when the food has been thus altered, it is forced by a contraction of the Stomach into the Duodenum, or first part of the Intestinal canal; this mass, however, does not consist wholly of nutritive parts, or such as are fit for the formation of blood, and another operation is necessary in order to separate them from such as are useless; this seems to be effected by the Bile and Pancreatic Juice.*

The Bile is formed by the *Liver*, which is a large glandular body, divided into several lobes, and situated immediately behind the Diaphragm, to which it is firmly attached; the form of the Liver is too well known to require a particular description, we have only to observe, therefore, that the Bile which it secretes, is conveyed by the Hepatic Duct into the Duodenum, within three or four inches of its origin. In Man, and the greater part of Quadrupeds, all the Bile does not flow immediately into the Intestine, there being a small vessel connected with the Hepatic Duct, which conveys a certain portion into a sac that is attached to the Liver, and

* This opinion appears to have been proved by the experiments of Mr. Ashley Cooper, Lecturer on Anatomy and Surgery, and Assistant Surgeon of St. Thomas's Hospital.

called the Gall Bladder, whence it is occasionally expelled; but this does not exist in the Horse, although Mr. Taplin, in his Stable Directory, has attempted to give an accurate description of its situation and diseases.

The *Pancreas* is also a glandular body, and secretes a fluid somewhat resembling saliva, which is conveyed by the Pancreatic Duct into the Duodenum, at the same place where the Hepatic Duct enters. When these fluids (the Bile and Pancreatic Juice) are poured into the Intestine, they mingle with the mass of digested food, which has been expelled from the Stomach, and separate from it all those essential parts which are fit to be converted into Blood; this process is termed chylification. We have before observed, when describing the Mesentery, or that membrane by which the Intestines are held together, that an immense number of small delicate vessels are spread over its surface; these are named *Lacteals*, from their containing a fluid, which in its appearance resembles milk; this fluid is in fact the essential parts of the food, proceeding to the heart in order to be converted into Blood. All the Lacteals open into the Intestines, and cover the whole of their internal surface, where they are always disposed to absorb the nutritious parts of the food in its pas-

sage through the Intestinal canal. Some Physiologists suppose that the Mouths of the Lacteals have the power of *selecting* such parts of the food as are fit to be converted into Blood, that no previous separation takes place, and that the Bile serves only as a natural purgative, constantly stimulating the Instestines, thereby keeping up a small degree of motion in them, and promoting the expulsion of the feculent parts of the food.

It will probably be asked how it is that the mass of food passes through the Intestines, since they are so convoluted that it cannot possibly be effected by the power of gravity; but if we examine their structure, this phœnomenon may be readily explained. The Intestines are composed, in great measure, of muscular fibres, some of which run in a *circular*, and others in a *longitudinal* direction: when the *circular* fibres contract, the *diameter* of the canal is diminished, and when the *longitudinal* fibres are in action, it becomes *shorter*; by the combined action of those fibres, the food is gradually propelled through the whole of the Intestinal canal; the motion thus excited may be distinctly seen in an animal recently killed, and in some it continues a considerable time after death. The Intestine, however, is not entirely composed of muscular

fibres, its internal surface is lined with a fine nervous and muscular membrane, which is endued with exquisite sensibility, and has the power of forming on its surface a mucous substance, which serves to protect it from the action of acrimonious bodies. Besides the muscular and nervous coat there is another which enters into the composition of the Intestine, and this is a thin membrane called *Peritonæum*. The Peritonæum not only forms the third and external coat, it likewise envelopes the whole of the Abdominal Viscera, and is then so reflected, as to form a kind of sac, in which they are all inclosed. Thus are the Intestines composed of three coats, which are closely in contact with each other; the Peritonæel, the Muscular, and the Nervous coat. We have yet to describe the course of the Lacteals, or those vessels which take up the chyle or nutritious parts of the food. We have before observed that they are spread upon the Mesentery, from whence they pass on towards the Spine, becoming larger and less numerous in their progress, at length they terminate in a large tube, which runs along the Spine, and is named Thoracic Duct; this pours its contents into a large Vein near the Heart, to which part it is immediately after conveyed and converted into Blood.

The *Kidneys* are two glandular bodies, situated within the loins; their office is to separate Urine from the Blood: the Urine thus separated is conveyed by two tubes of considerable length, termed *Ureters*, into the *Bladder*, which is composed of three coats like those of the Intestine, and when it has received a sufficient quantity of Urine to stimulate its muscular fibres into action, it contracts upon the Urine, and forces it out through the Urethra or Urinary canal. We have now finished our sketch of the Abdominal and Thoracic Viscera, which has been given merely with a view to render the description we are about to give of Internal Diseases more intelligible to those readers who are totally unacquainted with Anatomy, than it would otherwise have been.

CHAPTER II.

Inflammation.

IT was supposed by the celebrated Boerhaave, and other Physiologists of his time, that Inflammation depended on a viscidity of the Blood, which rendered it unfit for circulating in the finer vessels, and that hence arose obstructions and those appearances by which the disease is characterised: this opinion, however, has obtained very little credit with modern Physiologists, and is now universally rejected, it having been proved that Blood drawn from an animal labouring under Inflammation, is *more fluid*, and *remains fluid longer*, than that which is taken from the same animal when in health.

The most prevailing opinion at present respecting Inflammation is, I believe, that it consists in an increased action of the Heart and Arteries, when *general*; whereby the Blood circulates with unusual velocity, throwing the whole system into derangement, and when *local* or existing in a particular part, the increased action is also confined to the vessels of that part.

When a part is Inflamed, there arises in it unusual degree of heat, generally attended with considerable tension and swelling; the sensibility and irritability are always increased, and produced by it in parts where it did not before exist; in Bones and Tendons, for example, scarcely any *sensibility* can be perceived when they are in a state of health, but when *inflamed* it is roused to an alarming degree, and the most dangerous consequences may ensue from it. Inflammation has four modes of termination; the first is termed *resolution*, that is, when the disease, after going a certain length, gradually disappears again; the second, *suppuration*, that is when matter is formed, or an Abscess produced; the third is named *effusion*, which implies an extravasation either of Blood, coagulable Lymph or Serum; and the fouth, *gangrene* or mortification, by which is meant the death of the inflamed part. Inflammation of the external parts is generally occasioned by some mechanical injury, such as wounds, bruises, &c. sometimes, however, it rises in consequence of an *internal* Inflammation, or symptomatic Fever, and is then to be considered as an effort of nature to cure the internal disease: thus we sometimes find in Fevers, Abscesses taking place on the surface of the body, by which the

Fever is considerably diminished, and generally terminates favourably.

Inflammation is often produced by Plethora, or a redundancy of Blood in the Body; in this case it is sometimes *general*, the whole arterial system having its action increased; this also may be considered as an effort of nature to get rid of the superfluous Blood, and in such cases she must be assisted by copious bleeding: it more commonly happens, however, that the redundant Blood is determined to some particular part, occasioning *local* Inflammation; in Horses it very frequently falls upon some of the internal organs, and the Lungs are peculiarly liable to suffer in this case; from this source, indeed, their most dangerous Fevers arise. The Eyes also are very apt to suffer when Horses becomes Plethoric, to which cause, I believe, almost all the diseases of that delicate organ may be attributed.

In the treatment of external Inflammation, we should endeavour to bring it to the most favourable termination, that is resolution, except where it arises from an effort of nature to cure some *internal* disease; it is then desirable to bring it speedily to suppuration. The remedies to be employed for resolving Inflammation, are, local or general bleeding (vide bleeding) Purga-

tives, Fomentations, Poultices, or the Saturnine Lotion made warm; sometimes, indeed, I have seen cold applications used with success, such as Sal Ammoniac dissolved in Vinegar, Golard, &c. When Inflammation takes place in tendinous parts or joints, the Saturnine Poultice has been found an useful remedy, and in the latter case I have often found Blisters extremely efficacious; as in those cases the Inflammation generally proves more troublesome, and as the pain which it occasions is often so considerable as to produce symptomatic Fever, it becomes necessary to employ, without loss of time, the most prompt and efficacious means for its reduction; with this view we excite *artificial* Inflammation in the contiguous skin and cellular membrane, which are parts of far less importance in the animal œconomy, than joints or tendons, and capable of bearing a considerable degree of Imflammation without much inconvenience to the animal; this is done by means of Rowels and Blisters, and the Inflammation thus excited, will tend in a considerable degree to diminish that which is going on in the more important part. Should we fail in our endeavours to *resolve* Inflammation, it will probably terminate in *suppuration*; and when it appears that the disease does not abate by the

use of the remedies we have recommended, an assiduous application of Fomentations and Poultices, will expedite the suppurative process, and afford great relief to the animal. When the Inflammation, or rather the swelling which it occasions, arrives at this state, it is termed an *Abscess*, in which, when the suppuration is complete, and it contains *matter*, a fluctuation may be felt upon its being pressed by two fingers alternately; when this point has been ascertained, an opening is to be made with a lancet or knife, in such a way that the matter may be completely evacuated, and a future accumulation prevented; it is then to be dressed with Digestive Liniment or Ointment. Should the wound appear indisposed to heal when this treatment has been pursued for a short time, discharging a thin offensive matter, and wanting that red appearance by which the healing process is indicated, the Detergent Lotion will soon remove those unfavourable appearances; the *discharge* will become whiter and thicker, and red granulations of new flesh will sprout up; should these granulations however become luxuriant, constituting what is commonly termed *proud flesh*; they are to be kept down by means of the Caustic Powder. It sometimes happens

that when a part is inflamed and swollen, instead of going on to suppuration, it degenerates into a hard and almost insensible tumour; this depends on the Inflammation having terminated in *effusion* of coagulable Lymph, and is to be removed by stimulating Embrocations or Blisters.

When Inflammation runs very high, which is sometimes the case, in violent bruises, or deep and extensive wounds of the lacerated kind, it may terminate in *gangrene* or mortification, which is generally attended with danger; in this case the matter discharged, instead of being white and thick, consists of a dark coloured fluid, of a peculiar offensive smell; the constitution is generally affected, the pulse becoming quick, weak, and sometimes irregular, the appetite goes off, and there is a great degree of debility: when Inflammation terminates in this way, if it arises from a wound, let it be dressed with Digestive Liniment, Oil of Turpentine, or Camphorated Spirits of Wine; the diseased parts should be scarified, and fomentations applied almost incessantly, until the mortified parts appear to separate, and the matter loses in great measure its offensive smell, appearing whiter and more thick. When the Horse is weakened by the disease, and loses his appetite,

particularly if there is a copious discharge from the wound, one or two of the following Cordial Balls are to be given daily:

No. 1.

Yellow Peruvian Bark,	1 oz.
Ginger, powdered,	2 drams.
Opium,	1 dram.
Oil of Carraways,	20 drops.

Syrup enough to make the Ball for one dose.

No. 2.

Yellow Peruvian Bark,	½ oz.
Powdered Snake Root,	2 drams.
Powdered Cassia,	1½ dram.
Oil of Cloves,	20 drops.

Syrup enough to form the Ball for one dose.

Remark.---The Opium in the Ball, No. 1, is to be omitted when the Horse is costive, or if it appears to take off his appetite; but when the disease is accompanied with a purging, it is extremely useful.

When any of the *internal parts* are inflamed, a *Fever* is generally produced, the violence of which will depend upon the importance of the inflamed organ, as well as upon the extent of the Inflammation; some of the internal parts

being more essential to life than others, and when inflamed occasioning of course greater derangement in the system. The only *favourable* terminations to which internal Inflammation can be brought, are resolution and effusion, and as the first is by far the most desireable, the most vigorous measures should be adopted in order to effect it; the most important remedy in those cases is *copious bleeding*, and the earlier it is employed the more effectual will it prove: the next remedy is *external Inflammation*, artificially excited by means of Rowels and Blisters. The Fever powder and occasional Glysters, are of considerable service.

CHAPTER III.

Fever.

THE Fevers of Horses bear very little analogy to those of the human body, and require a different treatment. Writers on Farriery have described a great variety of Fevers, but their observations appear to have been drawn from the works of medical authors, and their reasoning seems to be entirely analogical. I have been able to distinguish only two kinds of Fever, the one, an idiopathic or original disease, and therefore properly termed *simple*; the other, dependant on internal Inflammation, and very justly denominated *symptomatic* fever: for example, if the Lungs, Bowels, or Stomach were inflamed, the whole system would be thrown into disorder, and a symptomatic Fever produced; but if a collapse of the perspirable vessels happens to take place, the Blood will accumulate in the interior parts of the body, and though Inflammation is not produced by it, the unequal distribution of the Blood alone will occasion that derangement in the system which constitutes the simple Fever. The simple Fever

does not occur so frequently as the symptomatic, nor is it by any means so formidable in its appearance, yet it is necessary to give it the earliest attention, for unless nature receives timely assistance, she will be sometimes unable to get rid of the load which oppresses her; and the Blood will accumulate in the interior part of the body, until Inflammation in some of the Viscera is produced, and a dangerous disease established. The following are the symptoms of simple Fever :—Shivering, succeeded by loss of appetite, dejected appearance, quick pulse, hot mouth, and some degree of debility; the Horse is generally costive and voids his urine with difficulty. Sometimes the disease is accompanied with quickness of breathing, and in a few cases with pain in the Bowels, or symptoms of cholic.

As soon as a Horse is attacked by this disease, let him be bled freely, and if costiveness is one of the symptoms, give a pint of Castor Oil, or the Oil of Olives, and let a Glyster of warm Water Gruel be injected; the Fever Powder is to be given once in twelve hours, and continued until its diuretic effect becomes considerable.—Warm water and mashes are to be frequently offered in small quantities; warm cloathing, frequent hand-rubbing, and a liberal allowance

of litter are also necessary, and when the Fever runs high, it is adviseable to insert Rowels about the Chest and Belly, in order to prevent internal Inflammation from taking place. When the disease appears to be going off, the Horse looking more lively, and the appetite returning, let him be led out for a short time in some warm situation, and give now and then a Malt mash, for the purpose of recovering his strength.

FEVER POWDER.

No. 1.

Powdered Nitre, - -	1 oz.
Camphor and Tartarized Antimony, of each - - - -	2 dr.

Mix for one dose.

No. 2.

Powdered Nitre, - -	1 oz.
Unwashed Calx of Antimony,	2 dr.

Mix for one dose.

No. 3.

Antimonial Powder, -	3 dr.
Camphor, - - -	1 dr.

Mix for one dose.

SYMPTOMATIC FEVER.

The symptomatic Fever is generally occasioned by high feeding, close stables, and a want of proper exercise; sometimes, however, a sudden transition from a cold to a hot temperature is evidently the cause of it; in this respect it is different from the simple Fever, which, as before observed, sometimes arises from exposing a Horse suddenly to a cold air, when he has been accustomed to a warm stable. Horses that are taken from camp or grass, and put suddenly into warm stables, are extremely liable to those internal Inflammations on which symptomatic Fever depends, and many thousands have fallen victims to this kind of treatment.

When a Fever is symptomatic, it is not preceded by shivering, nor is it so sudden in its attack as the simple Fever; but when it is not subdued by an early application of remedies, the symptoms gradually increase in violence until they present a very formidable appearance. When the disease however is occasioned by great and long continued exertion, it generally comes on suddenly, and the complaint has a very dangerous appearance in its earliest stage.

The symptomatic Fever has many symptoms in common with the simple Fever, which are,

loss of appetite, quick pulse, dejected appearance, hot mouth, and debility; and if to these are joined difficulty of breathing, and quick working of the flanks, with coldness of the legs and ears, we may conclude that an Inflammation of the Lungs is the cause of the Fever. If the Horse hangs down his head in the manger, or leans back upon his collar with a strong appearance of being drowsy, the eyes appearing watery and inflamed, it is probable that the Fever depends upon an accumulation of Blood in the vessels of the Brain, and that the staggers are approaching; in this case, however, the pulse is not always quickened, sometimes indeed I have found it unusually slow. When the symptoms of Fever are joined with a yellowness of the eyes and mouth, an Inflammation of the Liver is indicated. Should an Inflammation of the Bowels be the cause, the Horse is violently griped. An Inflammation of the Kidneys will also produce Fever, and is distinguished by a suppression of Urine, and an inability to bear pressure upon the loins. When Inflammation of the Bladder is the cause, the Horse is frequently staling, voiding only very small quantities of Urine, and that with considerable pain. Extensive wounds, and particularly those of Joints, will also produce symp-

tomatic Fever. Sometimes several of the internal parts are inflamed at the same instant, and indeed when Inflammation has existed for a considerable length of time, it is seldom confined to the organ in which it originated; the disease spreads to other Viscera, and when more than one organ is inflamed, the symptoms will generally be complicated; still, however, the essential remedies are the same, that is to say, copious and early bleeding, with Rowels and Blisters.

Having now given a general description of symptomatic Fever, I shall proceed to treat of those cases separately to which above I have briefly alluded.

INFLAMMATION OF THE LUNGS.

This is a very dangerous disease, and one to which Horses are extremely liable; the frequency of its occurrence seems to be occasioned by improper management, and not by any natural defect in the constitution of the animal, it may therefore be prevented by proper attention in the Groom. Medical writers make a distinction between Inflammation of the Lungs and of the Pleura or the Membrane, which covers those organs, calling the former *Peripneumony*, and the latter *Pleurisy*; this distinction, however,

is not necessary in Veterinary Nosology, since we never find those parts affected separately in the Horse. The progress of this disease is often very rapid, and unless proper remedies are employed at an early period, it frequently terminates fatally. Its approach is indicated by the following symptoms: loss of appetite, an appearance of dulness, and disinclination to motion, unusual quickness in the motion of the flanks, hot mouth, and sometimes a cough. If the disease, by adopting an inert, or improper mode of treatment, is suffered to proceed, all these symptoms will increase, respiration will become extremely quick and laborious, the Pulse more frequent, and at the same time weak. A striking appearance of uneasiness and anxiety may be observed in the animal's countenance, the nostrils are expanded, the eyes fixed, and the head inclining downward, the legs and ears become cold, and the debility is so considerable, that he is incapable of moving in the stall without great difficulty; he never lies down unless so much weakened as to be incapable of standing. The disease, however, is not always so rapid in its progress as we have here described it, and not unfrequently a considerable remission may be observed, which is occasioned probably by an effusion of serum

or water having taken place in the Chest, and this remission is sometimes so conspicuous, that we are led to give a favourable prognosis, the Horse beginning to feed again, and the Pulse becoming less frequent; but this flattering appearance often proves fallacious, the disease soon returns with accumulated force, and puts a period to the animal's life. I have seen cases where bleeding has not been performed with sufficient freedom, in which the Inflammation being checked in some degree, at length terminated in a plentiful effusion of water in the chest; when this happens the Horse returns to his food, looks more lively, in short, the symptoms of Fever in a great measure disappear; still, however, there is an unusual quickness in respiration, generally accompanied with a cough, the hind legs swell, and the Horse very rarely lies down; a rough unhealthy appearance may also be observed in the coat, the skin feeling as if stuck to the ribs, and the animal continues in a state of weakness; after some time the Inflammation generally returns, and then speedily ends in death. It sometimes happens that the Inflammation terminates in suppuration, in this case also the Fever is in some degree lessened, and the Horse begins to feed a little, but he still remains in a very feeble state, has a weak

cough, and discharges fœtid matter from his nostrils, at length the disease again becomes violent, and soon puts a period to his sufferings.

The first thing to be done when this dangerous disease is observed, is *to bleed copiously*, even till the Horse begins to faint from loss of Blood. I have seen six quarts drawn at one operation, and with the best effect; sometimes indeed the disease will be completely subdued by thus bleeding freely at its commencement.—Should the Horse be costive, or even if the Bowels are in a natural state, it will be adviseable to give a pint of Castor Oil, and inject a Glyster of Water Gruel; it will then be necessary, in order to divert the Inflammation from this important organ, to insert Rowels about the Chest and Belly, and to Blister the sides extensively; let the legs be kept warm by almost constant hand-rubbing, and warm cloathing must never be omitted: nothing is more pernicious in this complaint than obliging the animal to breath the impure air and stimulating vapours of a close stable; this is indeed so obvious a truth, that it would be unnecessary to mention it if it were not a constant practise with Grooms on this occasion to stop every crevise they can find, by which pure air might be admitted, and the noxious exhalations suffered to escape.

If the disease does not appear to abate in twelve hours after the bleeding, particularly if it has become more violent, let that operation be repeated, and with the same freedom as at first; we need not be apprehensive at this early period of the disease, of any dangerous debility ensuing from the loss of so much Blood, on the contrary, it will tend to re-establish strength, by subduing the Inflammation on which the Fever depends. In some cases, indeed, it has been found necessary to bleed several times, and very plentifully; it must be recollected, however, that when the Fever has existed for some time, and has nearly exhausted the Horse's strength, bleeding seldom does good, and in some instances, I believe, has been the means of hastening death. When suppuration takes place in the Lungs, though there is little probability of saving the animal, his life may be prolonged by giving frequently good Water Gruel and infusion of Malt Opium, Salt of Hartshorn, and other Cordials, will also be of service. I have generally given the following ball on those occasions, and though I have never seen a Horse recover after suppuration had taken place in the Lungs, yet these remedies have certainly afforded considerable relief.

Salt of Hartshorn,	-	1½ dr.
Opium,	-	1 dr.
Powdered Aniseeds,	-	½ oz.

Syrup enough to form the Ball for one dose.

When the mode of treatment I have recommended is adopted before the disease has gained much ground, it will generally succeed completely; considerable weakness will of course remain after the Fever has been removed, but that also will gradually go off, if proper attention is paid to the Horse's diet and exercise. When the appetite begins to return, it will be adviseable to give small quantities of Oats that have been softened by steeping in boiling water; good Water Gruel will also be found serviceable in recruiting his strength; the sweetest parts should be selected from the Hay, and given frequently in small quantities; Malt is an excellent restorative on these occasions, but must not be given too freely. When the weather is favourable, let the Horse be led out for a short time every day; or if a small paddock can be procured, and the season of the year will admit of it, he may be turned out for a few hours every day, while the Sun shines, taking care that he is well cloathed during that time, by these means he will be gradually restored to his original strength.

INFLAMMATION OF THE BOWELS.

This disease is not so frequent as the preceding, though equally dangerous, and generally more rapid in its progress. Inflammation may attack either the peritorial coat of the Intestine, or that delicate membrane which forms the internal or villous coat; in the former case the disease will be attended with costiveness, but in the latter a violent purging is the most conspicuous symptom; but which ever of these coats is first attacked, the Inflammation, in a short time generally spreads to the other.

The peritonæal Inflammation begins with an appearance of dulness and uneasiness in the Horse; the appetite is considerably dimished, or is entirely lost, and the Pulse becomes more frequent; the pain and febrile symptoms gradually increase; he is continually pawing with his fore feet, and frequently endeavours to kick his belly; he lies down and suddenly rises again, and looks round to his flanks, strongly expressing by his countenance the violence of the pain he suffers; his urine is commonly high coloured, and in small quantity, and sometimes voided with considerable pain; he is generally costive, and the pulse is remarkably small and quick; the legs and ears become cold, respi-

ration is very much disturbed, and sometimes, from the violence of the pain and the animal's struggling, profuse perspiration breaks out; at length mortification takes place, and is quickly succeeded by death. Sometimes the progress of this disease is remarkably rapid, in one instance I have seen a complete mortification take place in the course of twelve hours, and that very extensively.

When only the *internal* coat of the Intestines is inflamed, there is generally a violent purging, accompanied with febrile symptoms, these, however, are seldom so considerable as in peritonæal Inflammation, nor does the animal appear to be in so much pain. This disease is commonly produced by the improper use of physic, or by neglecting a Horse during the operation of a purgative.

In the treatment of peritonæal Inflammation, *early and copious bleeding is the most important remedy*. The efficacy of artificial Inflammation on the surface of the body is remarkably conspicuous in this disease, and I have seen even the actual cautery applied to the skin of the abdomen with manifest advantage; but as a substitute for this severe remedy, I would recommend covering the back with fresh sheep skins, which will soon excite, and keep up for a

considerable time, a copious perspiration on the part; the whole of the abdomen or belly should have the mustard embrocation carefully rubbed upon it, the stimulating effects of which may be promoted by covering the part afterwards with sheep skins or warm cloathing; Rowels also may be inserted about the Chest and Belly, putting into them blistering ointment instead of turpentine, or the common digestive, which is usually employed for the purpose. Should the Horse be costive, which, as we have before observed, is almost always the case, give a pint or twenty ounces of Castor Oil, and let Glysters of fine Water Gruel be injected. He should be allowed to drink plentifully of warm infusion of Linseed, or warm Water alone; and hand rubbing to the Legs, with a liberal allowance of litter, should not be forgotten. If the disease does not abate in six hours after the bleeding, the operation must be repeated, and if the costiveness continues ten or twelve hours after the Oil has been taken, give another dose, and repeat the Glysters. If the disease continues and increases in violence after all these remedies have been properly applied, there will be but little probability of recovery, particularly if the Pulse has become so quick, weak, and fluttering, that it can scarcely be felt, and there appears to be a

remission or cessation of pain, or if the Horse becomes delirious; these are always fatal symptoms, denoting that mortification is taking place, which is the certain harbinger of death; but if the pain should continue after the above remedies have been fairly tried, the anodyne Glyster may be injected.

With respect to the causes of peritonæal Inflammation, the most common appears to be high feeding and want of exercise; it is not unfrequently occasioned, however, by putting a horse suddenly into warm stables when taken from camp or grass, the fatal consequences of this management was often experienced in the army, I believe (though a different cause was assigned) before the Veterinary Art had made sufficient progress to point out its impropriety and danger.

In some instances the disease appears to have been produced by the distension which the Intestines have suffered in flatulent Cholic or Gripes, where that complaint has been neglected or improperly treated, or where the *spasm* has been so violent as to resist the operation of every remedy.

An Inflammation of the villous or internal coat of the Intestine, we have before observed, is most commonly occasioned by giving too strong

physic, or by inattention during its operatic and is generally accompanied with profuse purg ing; in this case a different treatment is re quired from that we have recommended for peritonæal Inflammation, and bleeding must not be employed unless the pulse is much accelerated and the febrile symptoms considerable; the oil also must be omitted; here the Mustard Embrocation and sheep skins to the back and belly are eminently useful.

It is of consequence to make the Horse drink freely of fine Water Gruel or Linseed Tea, which, if he refuses to drink it, must be given with a horn. If the disease continues, notwithstanding these remedies have been carefully employed, let the anodyne Glyster be injected, and if that fails, give the anodyne or the restringent Draft. It sometimes happens when a Horse has taken Physic, that gripes and violent sickness occur before the purging takes place, in this case by means of a Glyster, a plentiful exhibition of thin Water Gruel and exercise, we shall produce an evacuation and relieve the animal. Peritonæal Inflammation has sometimes been mistaken for flatulent Cholic or Gripes, but their appearances are very different, and they may easily be distinguished by referring to the annexed table, in which their symptoms are contrasted.

Restringent Draft.

Opium, - - -	1 dr.
Prepared Chalk, - - -	½ oz.
Compound Powder of Tragacanth,	1 oz.
Mint Water, - -	1 pint.

Anodyne Draft.

Opium, - - -	1½ dr.
Water Gruel, - -	1 quart.

Mix for one dose.

Mustard Embrocation.

Camphor, - -	1 oz.
Oil of Turpentine and Water of Pure Ammonia, each -	2 oz.
Flour of Mustard, -	8 oz.

To be made into a thin paste, and rubbed for a considerable time on the part.

Anodyne Glyster.

Opium, - - -	½ oz.
Water Gruel, - - -	3 pints.

Mix for one injection.

A TABLE,

SHEWING THE DIFFERENCE BETWEEN

FLATULENT CHOLIC OR GRIPES,

AND

Inflammation of the Bowels.

Symptoms of Inflammatisn of the Bowels.	*Symptoms of Flatulent Cholic.*
1. Pulse very quick and small.	1. Pulse natural tho' sometimes a little quickened.
2. Lies down and suddenly rises again, *seldom* rolling upon his back.	2. Lies down and rolls upon his back.
3. Legs and ears, generally cold.	3. Legs and ears generally warm.
4. Generally attacks rather gradually, is commonly preceded and always accompanied by symptoms of Fever.	4. Attacks suddenly, is never preceded, and seldom accompanied by any symptoms of Fever.
5. No intermissions can be observed.	5. There are frequently short intermission.

INFLAMMATION OF THE STOMACH.

The Stomach, like the Intestines, may be inflamed either on its *external* or *internal* surface; when the former is the seat of disease, the symptoms are nearly the same as those by which Peritonæal Inflammation of the Intestines is indicated, and the same treatment is required; the only difference observable in the symptoms is, that in this case the pain seems to be more acute and distressing than in the other, the same difference, indeed, may be observed, between the large and small Intestines, the latter being possessed of more sensibility than the former.

When Inflammation attacks the Peritonæal coat of the Stomach, it very soon diffuses itself to the small Intestines and neighbouring Viscera; or if the small Intestines be its original seat, it frequently spreads to the Stomach, and sometimes to the large Intestines also. In examining Horses, therefore, that have died of these diseases, we seldom find the Inflammation confined to one particular organ; it more commonly happens, indeed, that the whole of the Abdominal Viscera will exhibit morbid appearances, but in different degrees; those most contiguous to the part first diseased having suffered very considerably, while such as are more

remote from it, are perhaps scarcely altered, for we can generally distinguish the original seat of the Inflammation.

An Inflammation of the *Internal* or *Villous* coat of the Stomach is not a very common disease, and is generally occasioned either by poisons or strong medicines that have been swallowed, or by that species of Worms termed Bots. When poisons or strong medicines, incautiously given, are the cause of this disease, it will of course come on suddenly, the pulse will be extremely quick and so weak that it can scarcely be felt, the extremities will become cold, and there will be a peculiar dejected appearance in the animal's countenance, respiration will be disturbed; sometimes there will be a cough, and always a high degree of debility. The treatment of this disease consists in giving Oily or Mucilaginous liquids freely, such as decoction of Linseed, Gum Arabic dissolved in water, &c. and at the same time medicines that are capable of decomposing or destroying the poison; for this purpose I believe the Sulphurated Rati is useful in doses of half an ounce, provided the poison be either mercurial or arsenical. Glysters are to be injected, and if the disease is accompanied with purging, they should be composed of strong Linseed Decoction or Wa-

ter Gruel. I once saw five cases of inflamed Stomach, all of them occasioned by poison, in which the above treatment was pursued; four of them perfectly recovered, and one died.—The Inflammation which Bots produce in the Stomach is indicated by symptoms somewhat different from those we have been just describing, indeed it may more properly be considered as ulceration of the Stomach than Inflammation, since, upon examining Horses that have died of this complaint, I have always found Ulcers of considerable size. This disease generally comes on very gradually, the Horse becomes hide-bound, has a rough unhealthy coat, gradually loses flesh and strength, though he continues to feed well, and has a frequent and troublesome cough; the disease perhaps will continue in this state for some time, and no serious consequences are apprehended; its cause and seat are seldom suspected, medicines are given to remove the cough, with common alteratives for the purpose of improving his condition.

In some instances these Insects are spontaneously detached, and expelled through the Intestines: in such cases, if the Stomach has not been much hurt by them, it will gradually recover, and the Horse will be restored to his original strength and condition. It sometimes

happens, however, that these Worms produce such considerable mischief in the Stomach, as to throw the whole system into disorder. The Lungs are particularly liable to sympathize with the Stomach in this case, and frequently become inflamed in consequence. The Inflammation thus produced in the Lungs is extremely obstinate, and though it may be checked in some degree by bleeding, and the other remedies we have recommended for that disease, yet as the cause cannot often be removed, it generally, I believe, terminates fatally. This symptomatic Inflammation of the Lungs may be distinguished, I think, from the Idrophatic or original, by the following circumstance :— It is generally preceded by an unhealthy appearance in the coat and a troublesome cough ; the animal seldom bears bleeding well, the loss of any considerable quantity causing a rapid diminution of strength, whereas in the Idiophathic Inflammation of the Lungs, the strength of the pulse, as well as the whole system, is often increased by bleeding. With respect to the remedies for this disease, those recommended for Inflammation of the Lungs are the best, but when the Stomach has been considerably injured, there is little prospect of success. Infusion of Malt has been recommended for the purpose of

inducing Bots to disengage themselves (see Bots); I must confess, however, that I have never seen any thing effectually remove them, though they frequently come off spontaneously, particularly about the Spring. I have had an opportunity of examining the bodies of several Horses that had been destroyed in this way, in all of them there was mortification and suppuration of the Lungs, which appeared to have been the *proximate* cause of death, but on opening the Stomach an immense number of Bots was found, many of them attached to the *sensible* part, and to the Pylorus or beginning of the Intestine; in every instance there were Ulcers of considerable size found, in some the coats of the Stomach had been nearly destroyed. It appeared very clearly, I think, in all these cases, that the disease of the Stomach was antecedent to that of the Lungs.

It must not be supposed, from what has been said on this subject, that Bots cannot exist in the Stomach without producing all this mischief; on the contrary, they are often found in healthy Horses that have been shot or otherwise destroyed, and it has been known that such Horses have suffered no apparent inconvenience from them during life. In all these instances, however, they have been attached to the upper or *insensible* coat of the Stomach.

INFLAMMATION OF THE KIDNEYS.

This disease does not occur very frequently, and is generally occasioned, I believe, by an immoderate use of strong diuretic medicines. At the first attack of this complaint the Horse constantly stands as if he wanted to stale, sometimes voiding a small quantity of high coloured or bloody urine; when the Inflammation becomes more considerable, a suppression of urine and fever generally take place; if the loins are pressed upon, the animal shrinks from it, and appears to feel great pain. In the first place bleed freely, then give a pint or twenty ounces of Castor Oil, throw up Glysters of warm water, and cover the loins with Sheep skins, having previously rubbed upon them the Mustard Embrocation; should these remedies fail of procuring relief, repeat the bleeding, and should the Oil not have operated sufficiently, let another dose be given. All Diuretic medicines are to be carefully avoided.

INFLAMMATION OF THE BLADDER.

When the Bladder is much inflamed, its irritability is so increased, that it becomes incapable of containing any urine, contracting upon every drop almost that passes into it from the

Kidneys; in this complaint, therefore, the Horse is attempting almost constantly to stale, but voids only a few drops of urine, and that with considerable pain: it is generally attended with quick pulse and other symptoms of Fever. Nothing is more beneficial in this disease than causing the Horse to drink largely of Linseed Decoction, or any other mucilaginous liquid, and throwing up frequently Glysters of the same, bleeding, and a dose of Castor Oil, are likewise highly necessary; after the operation of the Oil, let the following Ball be given every sixth hour. Should no relief be obtained by these means, the Horse continuing to void his urine frequently, in small quantities, and with pain, give one dram of Opium twice a day and omit the Ball: costiveness tends very much to aggravate this complaint, whenever it occurs, therefore, let a Glyster be injected, and a dose of Oil given.

THE BALL.

Powdered Nitre,	-	½ oz.
Camphor,	- -	1 dr.
Liquorice Powder,	-	3 dr.

Honey sufficient to form the Ball for one dose.

INFLAMMATION OF THE LIVER.

This disease is indicated by a yellowness of the Eyes and Mouth, red or dark coloured urine, great weakness, and Fever, generally, though not always, accompanied with diarrhæa or purging; the Horse has a very languid appearance, and is almost constantly lying down: sometimes the progress of this complaint is very rapid, speedily terminating in death; at others it proceeds more slowly, the animal lingering for a considerable time; in this case it not unfrequently terminates in Dropsy, or Inflammation of the Bowels, the last case I met with terminated in this way.

Bleeding can only be employed at the commencement of this disease with safety, afterwards it generally does harm, by inducing a dangerous degree of debility; the sides should be Blistered, and if there be no purging, the Ball, No. 1, given once in twelve hours, until it occasions moderate purging; but if the Bowels are already in a lax state, the Ball, No. 2 or 3, will be better adapted to the complaint, and is to be given in the same way.

THE BALL.

No. 1.

Calomel, - - -	½ dr.
Aloes, - - - -	1 dr.
Castile Soap, - -	2 dr.
Rhubarb, - - -	½ oz.

Syrup enough to form the Ball for one dose.

No. 2.

Opium, - -	½ dr. to 1 dr.
Calomel, - - -	1 dr.
Castile Soap, - - -	2 dr.

Syrup enough to form the Ball for one dose.

No. 3.

Opium and Calomel, of each,	1 dr.
Emetic Tartar, - -	2 dr.
Liquorice Powder, - -	3 dr.

Syrup enough to form the Ball for one dose.

STRANGLES.

This disease generally attacks young Horses between the 3d and 5th year of their age, and consists in an Inflammation and swelling of the Glands under the Throat, accompanied with cough and a discharge of white thick matter from the Nostrils; sometimes there are likewise

a soreness of the Throat and difficulty in swallowing. The inflamed Glands commonly suppurate in a short time and burst, discharging a large quantity of matter; when this has taken place, the cough and other symptoms generally go off, the sore gradually heals, and the Horse speedily recovers. In some cases the Strangles assume a more formidable appearance, are attended with a considerable degree of Fever, and the Throat is sometimes so much inflamed, that the Horse is incapable of swallowing either food or water; but however violent the attack may be, I have always found that by adopting a proper mode of treatment, every unpleasant symptom may be easily removed, and a speedy recovery effected. It is not a very uncommon circumstance for the Strangles to attack young Horses while at grass, and then they are frequently not perceived until *nature* has nearly effected a cure.

The approach of Strangles may be known by a dulness of countenance, watery eyes, cough, and a slight degree of swelling in the Glands under the Jaw; as soon as they are discovered, let the hair be carefully clipped off from the inflamed Glands and contiguous parts of the Throat; let a large poultice be then applied to the Throat, in doing which it is necessary to

take care that it is so secured as to be constantly in contact with the Throat, for unless this is attended to, the Poultice will be but of little service. I have generally found that by rubbing a small quantity of some stimulating ointment on the inflamed glands, previous to the application of each Poultice, suppuration has been considerably promoted, for this purpose the following formula will be found useful :

Camphor, - - -	2 dr.
Oil of Origanum, - -	1 dr.
Spermaceti Ointment, -	2 oz. mix.

When matter is completely formed in the Glands, which may be known by the tumour becoming larger, and by the skin feeling tense, and somewhat elastic, an opening should be made with a lancet, and its contents evacuated ; this plan is certainly preferable to that of waiting until it bursts spontaneously, as the animal is instantly relieved by it, and the cure more speedily effected. To evacuate the matter perfectly, it is necessary to use moderate pressure with the fingers, and when this has been done, let a piece of Lint, dipped in Digestive Liniment be inserted for the purpose of keeping the lips of the wound open, and allowing the matter to

escape freely; the Poultice is to be continued until the swelling is perfectly reduced. When Strangles attack so violently as to render the Horse incapable of swallowing, and particularly if the swelling in the Throat is not considerable, it will be adviseable to blister the Throat, and keep the Bowels open with Glysters. It is very necessary, in every case of Strangles, to steam the head well, that is, to put hot bran mashes into the manger frequently, so that the Horse may inhale the vapours.

It is of consequence to distinguish cases of incipient Strangles from common colds; in the latter *bleeding* is an useful remedy, but in the former I believe it does much harm, by interrupting a process of nature. I cannot, by any *argument*, shew why bleeding should be improper in the Strangles, indeed, if our practice were guided by Theory only, we should be led to consider it as a case of common Inflammation, and consequently adopt that mode of treatment which would tend to remove it most expeditiously and prevent suppuration, and with this view we should have recourse to Bleeding and Purgatives; *experience*, however, certainly sanctions a different treatment, and has, I think, fully proved the propriety of using every means for encouraging suppuration. I have seen several

hundred cases in which this plan has been pursued and not one of them terminated unfavourably. Should a Cough or any unpleasant symptom remain after the Strangles are healed, let the following Alterative Ball be given every morning, until moderate purging is produced, and if it is found necessary, let it be repeated after an interval of four or five days. It is almost superfluous to add that great attention must be paid by the Groom; the head, neck, and chest, as well as the body, should be cloathed, warm water should be given frequently in small quantities, a large quantity of litter should be allowed, and hand-rubbing to the legs should never be omitted.

ALTERATIVE BALL.

Succotrine Aloes, - -	1 dr.
Emetic Tartar and Castile Soap, of each, - - -	2 dr.

To be made into a Ball for one dose.

CATARRH OR COLD.

It would be superfluous to give a particular description of this complaint, since it is so well known, and its appearances so generally understood, that scarcely any one can be at a loss to

distinguish it from other diseases. It consists in an Inflammation of the mucous membrane, which lines the internal part of the Nose, Throat, &c. sometimes attended with a slight degree of Fever; hence arise the Cough and discharge from the Nostrils, which are its principal symptoms. On the first attack of this complaint, bleeding will generally be found an effectual remedy, but if it is neglected until a considerable discharge has taken place from the Nostrils, it seldom proves beneficial. A dose of Fever powder is to be given every morning and evening until the symptoms abate, or a considerable diuretic effect is produced, and then every second or third day only.

Sometimes a swelling takes place in the parotid Glands, which are situated immediately beneath the ear. Should no unusual heat or tenderness be observed in those swellings, apply the stimulating ointment recommended for Strangles, but if they feel hot, are painful and appear to be in a state of active Inflammation, a Poultice is the best remedy. If the Eyes are inflamed and watery, a Rowel should be inserted under the Jaw, and if the Inflammation in the Throat is so considerable as to render swallowing painful and difficult, a Blister will afford great relief. Hot Bran Mashes should

be given frequently, which will not only serve to keep the Bowels open, but will act as a fomentation to the inflamed membranes, since the Horse will be constantly inhaling the vapour which escapes from them. Should he be costive (which is not likely to happen while he is taking Bran Mashes) let Glysters be injected occasionally. The Head and Chest, as well as the Body, should be well cloathed, the legs frequently hand rubbed, and a large quantity of litter allowed; by these means he will soon be restored to health. Should a Cold be attended with a considerable degree of Fever, or if the appetite goes off, and the flanks work quicker than usual, it is necessary to make some alteration in the treatment (vide Fever and Inflammation of the Lungs). It is necessary to observe before I conclude this subject, that the Strangles on their first attack are sometimes mistaken for a Cold; this may be productive of mischief, since bleeding is generally improper in that complaint; if, therefore, a Cold is accompanied with a swelling of the Glands under the Jaw, if they feel hot and are painful, and particularly if the Horse is young, we may conclude that the Strangles are approaching, and treat it accordingly.

Should the Cough remain after the other symptoms are gone off, give the Ball, No. 1, every morning, until moderate purging is produced, and if it continues after this, let the Ball, No. 2, be given every morning for a week.

No. 1.

Succotrine Aloes, - - 1 dr.
Castile Soap and Tartarised Antimony, of each, - } 2 dr.
To be made into a Ball with Syrup.

No. 2.

Powdered Squills, - - 1 dr.
Gum Ammoniac, - - 3 dr.
—— Opium, - - - ½ dr.
Syrup enough to form the Ball.

INFLAMMATION OF THE EYE.

When the Eye is inflamed it loses in some measure its transparency, appearing sometimes as if covered with a film, the lids are partially closed, and the haws become more visible.—Should the Inflammation have been brought on by some external injury, and particularly if it is not very considerable, the Eye Lotion will be

sufficient to remove it, but in more violent cases it will be necessary also to bleed moderately and give a Laxative Ball; by these means Inflammation arising from external injury may generally be cured in a short time. The Eyes often become inflamed in consequence of Cold and Fevers, in which cases the *cause* is to be chiefly attended to; when that is removed the Inflammation usually ceases. The most common cause, however, of this complaint, is high feeding, without a due proportion of exercise; these cases require great care and attention, for unless proper remedies are employed on the first attack, the disease (though it appears to go off) will be frequently returning, and in all probability eventually produce blindness. The first remedy to be employed on this occasion, is bleeding, and the quantity of blood that is drawn should be proportionate to the violence of the Inflammation, and the *condition* of the animal.—Should the vessels on the white part of the Eye and inner part of the Eye-lids appear to be distended with blood, great advantage will be derived from scarifying the latter with a lancet.—A Laxative Ball is to be given, and the Bowels afterwards kept in a lax state by means of Bran Mashes. I have found a Seton placed immediately under the Eye, a very useful remedy;

but unless the operation is nicely performed, it frequently leaves an unpleasant mark behind, which would lead a person, experienced in Horses, to suspect that the Eye had been diseased, and might therefore diminish the value of the Horse. A shade, so adapted as to preserve the Eye from the irritation of dust and light, will be found useful. This kind of Inflammation generally comes on rather suddenly, sometimes attacking only one Eye, at others, both are affected; as there is no apparent cause for this sudden attack of Inflammation, the Groom very commonly attributes it to seeds or dust having fallen from the rack into the Eye, and very little attention is paid to it; notwithstanding this neglect, the disease frequently goes off, and in some cases its disappearance is nearly as sudden as its attack; in a short time however, it again appears as unexpectedly as at first, and again perhaps goes off; in this uncertain way it may continue a considerable time, the Eyes sometimes appearing transparent, and free from Inflammation, at others, watery, inflamed, and opaque on the surface; at length the internal parts of the Eye are affected, and a Cataract produced. It has been supposed that the diseases of a Horses Eye are frequently hereditary, or dependant on some

natural defect in the structure. I do not know how far this opinion may be true, but having never seen a case which seemed to corroborate it, I am not inclined to give it much credit; it is not very improbable, however, that the eyes of some Horses may be *naturally* weak, and more liable to become inflamed when exposed to the exciting causes of Inflammation, than such as are originally endued with a proper degree of strength; but it appears to me that where this weakness or aptitude to disease exists, it is more frequently the effect of some injury which this tender and delicate organ has sustained, than a defect of *nature*. Whenever a Horse's Eye becomes inflamed, it is necessary to enquire into the *cause* of the Inflammation; if it arises from any mechanical injury, and is not very considerable, there will be great probability of its being speedily removed, by means of the remedies I have pointed out; but if the Inflammation has arisen without any apparent cause, depending perhaps upon plethora or redundancy of blood in the system, there will be some chance of a radical cure, provided the proper remedies are employed sufficiently early, but if they are neglected at the commencement of the disease, though the Inflammation, after some time appears to go off, and the Eye, to a

superficial observer, seems to have recovered, yet the disease frequently returns and ultimately occasions blindness. Should the disease have occurred before, and particularly if the former attack was violent, there is still less chance of its being removed, and all our remedies will probably prove ineffectual; in this case the Alterative, No. 3, may be tried. It frequently happens that when both Eyes are inflamed, and a complete cataract forms in one of them, the other becomes perfectly sound and strong. It must be observed that when a Horse has suffered more than once from this disease, and is in low condition, evacuations must not be made too freely; there are few cases, however, where moderate bleeding and a Laxative Ball are not required. With respect to topical applications, or those remedies which are applied immediately to the Eye, I must confess that I have not seen much benefit derived from them, except when the Inflammation has abated considerably, and there remains an opacity or film on the surface, and then common Salt, finely powdered, has often proved useful; but if the Eye has been in this state for some time, and the opacity is very considerable, white Glass, finely powdered and mixed with Honey, is a more effectual remedy. Whenever the Eyes are weak, or in a state of

Inflammation, the vapours which arise from foul Litter, should be carefully guarded against, indeed, it is by no means an improbable conjecture that when the Eyes are weak, these irritating vapours may often prove the exciting cause of Inflammation. There is a cartilaginous body connected with the Eyes of Horses, commonly termed the Haw. Whenever the Eye is drawn into the Socket, (which the Horse has the power of doing by means of a muscle that does not exist in the human subject) the Haw is forced over the Eye, so that when dust happens to adhere to the surface of the Eye, he is enabled by means of this cartilage to wipe it off; and as light is painful to the animal when the Eye is in a state of Inflammation, we generally find that organ, on such occasions, drawn more than usual into the Socket, and consequently the Haw becomes conspicuous on its surface. Farriers in this case consider the Haw as an unnatural excrescence, and the cause of the disease, they frequently therefore cut it off. The celebrated Mr. Taplin considered the Haw as a preternatural enlargement of the corners of the Eye.

LOCKED JAW.

This disease, very fortunately occurs but seldom, and generally terminates fatally; it begins with a difficulty in mastication, at length the Jaws become so completely and immoveably closed, that neither medicines nor food can be got into the Stomach; the muscles of the neck are generally in a state of rigid contraction, and the animal appears to suffer great pain: it is often brought on by trifling causes, such as wounds of the Foot, Inflammation in the Tail, from docking or nicking, &c. and sometimes it attacks without any apparent cause. Various remedies have been tried in this complaint, but I do not think any effectual mode of treatment has yet been discovered; immersion in cold water, or even snow, is said to produce a temporary relaxation of those muscles by which the Jaws are closed. Opium and Camphor have been strongly recommended. I have lately been informed of a case in which a combination of those medicines completely succeeded. In America and the West India Islands, where the disease is much more frequent than it is in this climate, strong stimulants have been found very effectual; it would be adviseable therefore

to try the same plan in Horses should Opium and Camphor fail. The best stimulants for this purpose are Spirits of Hartshorn, Ether, Opium and Brandy.

LAMPAS.

When the bars or roof of the Horse's mouth, near the front Teeth, become level with, or higher than the teeth, he is said to have the *Lampas*, and this is supposed to prevent his feeding. Farriers burn down this swoln part with a red hot iron made for the purpose. I believe this operation is performed much more frequently than is necessary, but I have never seen any bad consequences arise from it.

ROARING.

This disease takes its name from a peculiar sound in respiration, particularly when the Horse is put into a brisk trot or gallop; it seems to arise from lymph that has been effused in the Windpipe or its branches, which becoming solid obstructs, in a greater or less degree, the passage of air. As a remedy for this complaint

blistering the whole length of the Windpipe has been recommended; I believe, however, that it is always incurable.

BROKEN WIND.

It seems to be universally allowed that this complaint is incurable, though it will admit of considerable alleviation, and if its approach be perceived sufficiently early, may probably be prevented. Horses that appear to be most subject to it, are those with voracious appetites, that eat even their litter, and keep themselves in good condition upon a moderate allowance of corn; also such as are fed highly, and at the same time not properly exercised. It has been observed by a modern author,* "that "the most common appearance of the Lungs "in Broken Winded Horses, is a general "thickening of their substance, by which their "elasticity is in great measure destroyed, and "their weight specifically increased, at the "same time that their capacity for air is dimi-"nished; during life the Lungs entirely fill

* An enquiry into the structure and animal œconomy of the Horse, by Richard Lawrence, Veterinary Surgeon, Birmingham.

"the cavity of the Chest, so as to leave no "space between their outward surface and the "inward surface of the Ribs (vide structure of "the Lungs); thus they dilate and contract, "following up by their own elasticity the "action of the Ribs and Diaphragm. If the "Chest is punctured in the dead subject, the "air rushes in and the Lungs collapse; but if "the Horse was Broken Winded, the Lungs "do not collapse. This state of the Lungs "sufficiently accounts for the difficulty of respi-"ration, for as their *faculty of dilatation is de-"stroyed, the Ribs cannot expand without "forming a vacuum in the Chest*, which the "pressure of the external air prevents, which "may be readily perceived in the case of Bro-"ken Wind, for then the intercostal muscles "are so strongly retracted, as to form a deep "furrow between every rib, as well as a depres-"sion in the flanks; on this account air is *re-"ceived into the Lungs with great difficulty, "but its expulsion is not so difficult*, as the re-"turn of the Ribs and Diaphragm naturally "force it out by their pressure. Thus in Bro-"ken Winded Horses *inspiration is very slow*, "but *expiration is sudden and rapid*, as may "be seen by the flanks returning with a jerk."

It appears to me that the observations of Mr. Lawrence on this subject are not correct. The Lungs of Broken Winded Horses that I have examined, have generally been unusually large, with numerous air bladders on the surface; this must have arisen from a rupture of some of the air cells, for in that case some part of the air which is inspired, will necessarily get into the *cellular membrane* of the Lungs, and diffuse itself until it arrives at the surface, when it will raise the Pleura so as to form the air bladders we observe. This is the reason that the Lungs of Broken Winded Horses do not collapse when the Chest is punctured, and this will serve to explain the peculiar motion of the flanks in Broken Winded Horses, which does not consist, as Mr. L. asserts, in a quick expiration and very slow inspiration, but quite the reverse; air is received into the Lungs *very readily*, which is manifested by a sudden falling of the flanks, but is expelled *slowly*, and *with great difficulty*, as may be perceived by the long continued exertion of the Abdominal muscles.

When the membrane which lines the Windpipe and all its branches, has been affected with Inflammation, it becomes thickened in consequence, and the capacity of the Lungs will of

course be diminished; this will cause a *quickness* in respiration, but not that irregular or unequal kind of breathing, by which Broken Wind is characterized; the complaint which is thus produced, is commonly termed Thick Wind, and the Horse so affected, if made to move rapidly, wheezes almost like an asthmatic person, and is unfit for any violent exercise. It not unfrequently happens, I believe, that this complaint proves a cause of Broken Wind, for when the membrane is much thickened, many of the finer branches of the Windpipe are probably obstructed in a greater or less degree, the violent coughing which usually accompanies this disease, will, under such circumstances, be very liable to rupture some of the air cells. The same effect may be produced by violent exercise when the Stomach is distended with food or water; I believe, however, that a Plethora or fulness of habit is most commonly the *remote* cause of Broken Wind; in that case there is generally an undue determination of blood to the Lungs, whereby the secretion within the air vessels is increased, and perhaps rendered somewhat acrimonious and viscid, exciting a violent and troublesome cough.

Whenever a Horse appears to be imperfect in his wind, if he coughs violently, particularly

when exercised, with unusual working of the flanks, and if at the same time he appears to be in good health and spirits, feeding heartily and eager for water, let him be bled moderately, and take a Laxative Ball, by these means, assisted by a Bran diet and regular exercise, the Lungs will soon be relieved, and the cough, if not completely removed, will be considerably diminished; then give the following Ball every morning for a week, and take care that regular exercise is never omitted: it will be adviseable also to prevent the Horse from filling himself too much with hay or water, the latter should be given five or six times a day, in small quantities; the common method of stinting a Horse in water, when his wind is supposed to be bad, is certainly prejudicial; corn should be given sparingly, for high feeding tends very much to aggravate the complaint; bran is an useful diet, if mixed with corn, and if carrots, or any other succulent vegetable, can be procured, they will be found of considerable service. The vapours which arise from foul litter and the air of a close stable are extremely pernicious. I have seen very good effects from turning the Horse into a paddock during the day, when the weather is favourable. When the cough and other symptoms have been removed, these means must

be still persevered in, or the disease will probably return: regular and long continued exercise tends more than any thing to keep it off, but violent exercise is extremely improper.—Whenever costiveness occurs it should be removed by means of a Glyster and Bran Mashes, and should the Horse be disposed to eat his litter, it is to be prevented by means of a muzzle.

THE BALL.

Powdered Squills, -	1 dr.
Gum Ammoniac, - -	½ oz.
Powdered Aniseeds,	3 dr.

To be made into a Ball with syrup, for one dose.

JAUNDICE.

This disease is indicated by a yellowness of the Eyes and Mouth, dulness and lassitude; the appetite is generally diminished, the urine of a reddish or dark colour. Sometimes the complaint is attended with costiveness, but more commonly with a purging. This disease does not often arise from an obstruction in the biliary ducts, as in the human subject, but generally from increased action of the Liver, whereby an unusual quantity of bile is secreted. Inflammation of the Liver is sometimes mistaken for

Jaundice, but may be distinguished from it by the *Fever* with which it is always accompanied.

When costiveness is one of the symptoms of Jaundice, give the Ball, No. 1, every morning, until moderate purging is produced, but if the Bowels are already open, or in a state of purging, give the Ball, No. 2, every morning. The Horse's strength should be supported by infusion of Malt or Water Gruel.

THE BALL.

No. 1.

Calomel, - -	½ dr.
Aloes, - - -	1 dr.
Castile Soap, - -	2 dr.
Rhubarb, - - -	3 dr.

To be made into a Ball with syrup, for one dose.

No. 2.

Calomel and Opium, of each	1 dr.
Columbo Root, Powdered,	3 dr.
Powdered Ginger, -	½ dr.

Syrup enough to form the Ball for one dose.

FLATULENT CHOLIC, GRIPES, OR FRET.

This disease generally attacks rather suddenly, and is brought on by various causes; sometimes it is occasioned by drinking a large quantity of cold water when the body has been heated, and the motion of the blood accelerated by violent exercise. In Horses of delicate constitutions, that have been accustomed to hot stables and warm cloathing, it may be brought on merely by drinking water that is very cold, though they have not been previously exercised. Bad hay appears to be another cause of the complaint; but it frequently occurs without any apparent cause, and then probably *depends* upon a sudden loss of energy in the Stomach or Bowels, occasioning a spasmodic constriction of the Intestine, and a confinement of air. The air which is thus confined, does not appear to be produced by fermentation of the contents of the Intestine, it is more probably a secretion of the internal or villous coat, in consequence of its atonic state; this opinion, however, is founded merely upon analogy, the air having never been examined; but I have been informed that the air which is confined in the intestines of persons who have died of the disease termed

Tympany, consists, in great measure, of Azotic or Nitrogene Gas, which could not have been the product of fermentation. This opinion will appear still more probable when we consider the immense quantity of air that is sometimes discharged from the human Stomach, even after its contents have been expelled by vomiting.

The pain and uneasiness which this complaint occasions are so considerable as to alarm those who are not accustomed to see it, and lead them to be apprehensive of dangerous consequences; but if properly treated, it may be easily and expeditiously removed. It begins with an appearance of uneasiness in the Horse, he is frequently pawing the litter, voids a small quantity of excrement, and makes fruitless attempts to stale; the pain soon becomes more violent, he endeavours to kick his belly, and looks round to his flanks, expressing by groans the pain he labours under; at length he lies down, rolls about the stall, and falls into a profuse perspiration; after a short time he generally gets up, and appears for a minute or two to be getting better, but the pain soon returns and the succeeding paroxysm is generally more violent than the former—the Pulse is seldom much accelerated, nor are there any symptoms of Fever. The disease will sometimes go off

spontaneously; it more commonly happens, however, when proper remedies are not employed, that the air continues to accumulate, and so distends the Intestine, as to produce Inflammation of its coats: the distension has sometimes been so considerable as to rupture the Intestine, whereby the Horse is speedily destroyed.

As soon as this disease is observed, let one of the following Draughts be given, and a Glyster injected, composed of six quarts of Water Gruel or warm Water, and 8 oz. common Salt. If the disease has existed for several hours, and the pain appears to be very considerable, particularly if the Pulse has become quick, it will be adviseable to bleed to three quarts, with a view to prevent Inflammation and remove the spasmodic contraction of the Intestine. If the disease, however, is perceived on its first attack, the Draught and Glyster will generally be sufficient to cure it; but should no relief be obtained by these means in an hour or two, let the Draft be repeated, and let the Belly be rubbed for a considerable time with the Mustard Embrocation. Should the disease be so obstinate as to resist even these remedies, which will scarcely ever happen, give a pint of Castor Oil, with 1½ oz. Tincture of Opium: as soon

as the Horse gets up, let him be rubbed perfectly dry by two persons, one on each side, and afterwards let him be well clothed. It is necessary in this complaint to provide a large quantity of litter for the purpose of preventing the Horse from injuring himself during the violence of the paroxysm.

THE DRAUGHT.

No. 1.

Balsam of Capivi, - -	1 oz.
Oil of Juniper, - -	1 dr.
Spirit of Nitrous Ether, -	½ oz.
Simple Mint Water, -	1 pint.

Mix for one dose.

No. 2.

Venice Turpentine, -	1 oz.

Mix with the yolk of an Egg, and add gradually

Peppermint Water, - -	1 pint.
Spirit of Nitrous Ether,	½ oz.

Mix for one dose.

No. 3.

Camphor, - - -	2 dr.
Oil of Turpentine, - -	½ oz.
Mint Water, - - -	1 pint.

Mix for one dose.

As this complaint is liable to occur during a journey, in situations where the above remedies cannot be readily procured, I have annexed a formula for a Ball, for the convenience of those who are in the habit of travelling. If this Ball is wrapped up closely in bladder, it may be kept a considerable time without losing its virtues.

THE BALL.

Castile Soap, - -	3 dr.
Camphor, - - -	2 dr.
Ginger, - - -	1½ dr
Venice Turpentine, - -	6 dr.

To be made into a Ball for one dose.

APOPLEXY OR STAGGERS.

This disease generally begins with an appearance of drowsiness, the Eyes being inflamed and full of tears, and the appetite diminished; the disposition to sleep gradually increases, and in a short time the Horse is constantly resting his Head in the manger and sleeping, the Pulse is seldom much altered; in a few cases I have found it unusually slow; costiveness and a deficient secretion of urine commonly attend this complaint. Sometimes the disease will continue in this state for several days, at others it assumes a

formidable appearance very early, or even at its commencement, the Horse falling down and lying in a state of insensibility, or violent convulsions coming on. Sometimes a furious delirium takes place, the Horse plunging and throwing himself about the stable, so as to render it dangerous for any one to come near him. From this variety in the symptoms, writers on Farriery have divided the disease into the *sleeping* and the *mad* Staggers. It has been supposed that the Staggers are frequently occasioned by a diseased condition of the Stomach, I must confess, however, that very few cases of this kind have occurred in my practice, and in these the symptoms were different from those I have described. When the complaint originates in the Stomach, the Horse is generally in a state of debility previous to the attack, the Pulse is quick and weak, there is a yellowness in the Eyes and Mouth, and should the Stomach be considerably distended with air and food, the Belly will be swollen and feel very tense, and respiration will be much disturbed; it will also occasion very acute pain, which will be strongly expressed by the animal. In cases of this kind it must be obvious that bleeding is a doubtful remedy, and should not be employed unless there are evident marks of congestion in the

Brain, whereas in almost every case of Staggers that I have met with, *bleeding* has proved a sovereign remedy, if employed with *sufficient freedom*, before an effusion of water, extravasation, or inflammation have taken place; for it appears to me that the first stage of the complaint arises from an accumulation of blood in the vessels of the Brain, which impedes, in some degree, the functions of that important organ; and if these vessels are not relieved by copious bleeding, there will be either an effusion of water in its ventricles, an inflammation of the membranes, or a rupture of some blood vessel, and consequently an extravasation of blood. These are the causes which give rise to those violent symptoms denominated mad Staggers, and which frequently prove fatal.

There is sometimes so *sudden* a determination of blood to the Brain, that those dangerous symptoms make their appearance before any effectual remedies can be applied.

From the view we have given of the Staggers, it will appear, that the terms which Farriers have adopted to distinguish its different appearances, are very inadequate; and that it would be better to consider the disease under the two following heads, viz. the *Idiopathic* and the *Symptomatic* Staggers. In the former, bleeding is the grand

remedy, and seldom fails of affording relief if employed with freedom at the commencement of the disease. It will be adviseable also to give the following Purgative Draft, and inject a stimulating Glyster, composed of a gallon of Water and 8 oz. common Salt. Should the symptoms not abate in eight or ten hours after the bleeding, there will be great probability of obtaining relief by opening the temporal arteries, and suffering them to bleed freely. I once saw a case in which the efficacy of this plan was remarkably conspicuous: the Horse had been labouring under the disease for several days, and delirium had taken place, though he had been bled freely, and in every respect, according to the account I received, treated properly; when I saw him he was lying down in a state of insensibility, having just before been plunging and throwing himself about very violently; the attendants supposed him to be dying, indeed, I should have been of the same opinion had not the Pulse retained some degree of strength. I immediately opened both temporal arteries, and after they had bled about ten minutes, the Horse got upon his Legs, appeared perfectly easy, and from that moment gradually recovered without the assistance of any other remedy. When the disposition to sleep is not removed by the

first bleeding, the Head should be blistered, and a Rowel inserted under the Jaw. With respect to the Symptomatic Staggers, which originate in a diseased condition of the Stomach, a different treatment must be pursued. In this case medicines of a stimulating and antispasmodic quality have been strongly recommended, of this kind are Salt of Hartshorn, Assafætida, Ether, fætid Spirit of Ammonia, Camphor, &c. &c. It appears to me, however, that an opening medicine is preferable, and for this purpose the following formula is recommended :

Aloes, - - -	6 dr.
Myrrh and Ginger, of each,	2 dr.
Castile Soap, - - -	3 dr.
Simple Mint Water, -	1 pint.

Mix for one dose.

Its operation may be assisted by a Glyster.—Should this not succeed in relieving the animal, it will be adviseable to have recourse to one of the three following formulæ :

No. 1.

Fætid Spirit of Ammonia,	1 oz.
Camphor, - -	1 dr.
Mint Water, - -	1 pint.

Mix for one dose.

No. 2.

Spirit of Hartshorn, -	1 oz.
Powdered Valerian, - -	6 dr.
Mint Water, - - -	1 pint.

Mix for one dose.

No. 3.

Assafætida, - - -	½ oz.
Camphor and Salt of Hartshorn, of each, - -	1 dr.

To be made into a Ball with Syrup for one dose.

PURGATIVE DRAFT.

Succotrine Aloes, - -	1 oz.
Castile Soap, - - -	2 dr.
Common Salt, - -	4 oz.
Water, - - - -	1 pint.

Mix for one dose.

Bleeding, it has been before observed, is seldom proper in Symptomatic Staggers; but whenever the Pulse is tolerably strong, and the disposition to sleep considerable, I think it should by no means be omitted.

DIARRHÆA OR PURGING.

This is not a very common disease in the Horse, and seldom difficult of cure; it may be occasioned by a suppression of perspiration, or by an increased secretion of bile; from whatever cause it may proceed, give in the first place the following Laxative Ball, and if the disease does not cease in two or three days, let the Astringent Ball be given. Warm cloathing is particularly required in this complaint, and exercise should not be neglected; his water should be moderately warm, and given frequently in small quantities. When a purging is accompanied with griping pains and fever, it is to be considered as a case of Inflammation in the Bowels, and treated accordingly.

LAXATIVE BALL.

Succotrine Aloes, - -	4 dr.
Powdered Rhubarb, - -	3 dr.
Castile Soap, - - -	2 dr.

To be made into a Ball with syrup for one dose.

ASTRINGENT BALL.

Opium, - - - -	1 dr.
Tartarized Antimony, - -	3 dr.
Powdered Ginger, - -	2 dr.

Syrup enough to form the Ball for one dose.

DIABETES OR EXCESSIVE STALING.

This disease often proves extremely obstinate, and not unfrequently incurable; I am inclined to believe, however, that if attended to at its commencement, a cure may sometimes be effected without much difficulty. The complaint at first consists merely in an increased secretion of Urine, the Horse staling frequently, and in considerable quantity; the Urine is generally transparent and colourless like water; at length he becomes feverish, the Mouth feels dry, and he seems to suffer much from thirst, the appetite is diminished, and the Pulse becomes quick; the Horse is generally hide-bound, and gradually loses flesh and strength. Lime water has been much recommended as a remedy for this disease; I have seen it given, however, in two cases without any good effect. Others recommend Diaphoretic medicines, from a supposition that it depends in great measure upon a suppression of perspiration. Bark and other tonics have also been considered as useful remedies. About two years ago I had four cases of Diabetes under my care, nearly about the same time, and they were all speedily cured by means of the following Ball:

BALL FOR DIABETES.

Opium, - - - -	1 dr.
Powdered Ginger, - -	2 dr.
Yellow Peruvian Bark, -	½ oz.

Syrup enough to form the Ball for one case.

But these were all recent cases, and not attended with fever, nor had the Horses lost much strength or become hide-bound in any considerable degree, yet the disease was well marked, and would, I have no doubt, have produced all those symptoms, had it not been attacked as soon almost as it made its appearance. In all these cases the quantity of Urine discharged was very considerable, the Mouth was dry, and there appeared to be a constant thirst. It seems, therefore, highly necessary to attend to this disease at its commencement, since, if neglected at this period, it becomes extremely obstinate, and sometimes incurable. Should the above remedy fail, try one of the following formulæ:

BALLS FOR DIABETES.

No. 1.

Emetic Tartar, - -	3 dr.
Opium, - - - -	1 dr.

To be made into a Ball for one dose.

No. 2.

Salt of Hartshorn,	2 dr.
Opium,	½ dr.
Powdered Ginger,	1 dr.
Liquorice Powder,	3 dr.

To be made into a Ball for one dose.

No. 3.

Salt of Steel,	½ oz.
Myrrh,	2 dr.
Ginger,	1 dr.

To be made into a Ball for one dose.

SUPPRESSION OF URINE.

Horses are often attacked with a difficulty in staling or making water, sometimes amounting to a total suppression of that excretion; this most commonly arises from spasm in the neck of the Bladder, or from hardened excrement in the Rectum or latter part of the Intestines. When this happens let Glysters of warm water be injected until all the hard excrement is discharged, then give the following Ball.

Nitre, - - - - - 1 oz.
Camphor, - - - - - 2 dr.

Linseed, Meal, and Syrup enough to form the Ball for one dose.

Should there be any appearance of fever, or should the Horse appear to feel pain when the loins are pressed upon, it is probable that the Kidneys are inflamed, in such cases the Ball would be improper (vide Inflammation of the Kidneys).

WORMS.

There are three kinds of Worms found in Horses. The most common and mischievous reside in the Stomach, and are named Bots. They are of a reddish colour, and seldom *exceed* three fourths of an inch in length: at one extremity they have two small hooks, by which they attach themselves, and the belly seems to be covered with very small feet; they are most frequently found adhering to the *insensible* coat of the Stomach, and then they do not appear to cause any considerable uneasiness or inconvenience; sometimes, however, they attach themselves to the *sensible* part, and do great injury to this important organ, keeping

up a constant irritation, and thereby occasioning emaciation, a rough staring coat, hide-bound; and a cough. I have met with several instances of their destroying the Horse by ulcerating the Stomach in a considerable degree, and cases are recorded where they have penetrated quite thro' the Stomach. It is astonishing with what force these worms adhere, and how tenacious they are of life; they have been found to resist the strongest poisons, nor have we yet discovered any medicine capable of destroying them, or of detaching them from their situation. It seems probable that this Worm, like the Caterpillar, undergoes several changes; it is said to be originally a Fly, which depositing its Eggs in the Horse's coat, causes an itching which induces him to bite the part, in this way he is supposed to swallow some of the Eggs, which, by the heat of the Stomach, are brought to maturity and produce Botts. When the Botts are fit to assume the chrysalis state, they are spontaneously detached, and gradually pass off with the fœces. This is the most rational account we have of their production. It has been asserted that the Fly from which Botts are produced, crawls into the anus of Horses, and deposits its Eggs there, that the Worms when hatched soon find their way *farther up the In-*

testines, and often penetrate into the Stomach. This account is literally copied by a late writer on Veterinary Pathology;* but it appears to me rather strange that any one who has considered the structure of the Horse's Intestines should for a moment give credit to it. It seems *impossible* indeed for this Worm to crawl from the Anus to the Stomach, and as far as my observation goes, they are never found residing in the Intestines; sometimes we find two or three, but they are evidently proceeding towards the Anus to be expelled. I have before observed that I am not acquainted with any medicine that is capable of detaching or destroying these worms, though I have frequently tried the strongest mercurial preparations, and many powerful medicines; we are informed, however, by Mr. Ryding, in the book just noticed, that the following medicine will be found "*most effectual:*

"Take yellow Emetic Mercury, - 1 dr.
"Liquorice and Linseed Powder, of each, ½ oz.
"Syrup or Honey sufficient to form the Mass;
"and divide into two Balls.

"The Horse should be put upon a diet of "bran before this medicine is given, after "which let him take one of these Balls, and

* Ryding's Veterinary Pathology.

" the other about forty hours afterwards, and " when you have waited about the same time " for the operation of the medicine, let the " following brisk purge be given :

" Take Barbadoes Aloes, from 6 to 8 dr.
" Calomel, - - - 1 dr.
" Venice Turpentine sufficient to form the Ball.

" By paying proper attention to the operation " of this medicine, we may be able to judge if " it has the desired effect; but if, after it " is over, we suspect there are still some " Worms remaining, a second course may be " repeated in about a fortnight afterwards."

The next worm we have to describe is very slender, of a blackish colour, and seldom exceeds two inches in length; they are never found in the Stomach, and very rarely in the small Intestines, the largest part of the canal being generally the place of their residence: here they prove a constant source of irritation, occasioning loss of condition, a rough unhealthy looking coat, and frequently a troublesome cough. A variety of alterative medicines have been proposed for the destruction of these worms, and some of them are supposed to be infallible; I believe, however, that none of them are possessed of much efficacy, and ought not therefore to be depended upon.

The following are the Alteratives to which I allude :—Savin, Rue, Box, Æthiops Mineral, Antimony, Sulphur, Emetic Tartar, Calomel, and Vitriolated Quicksilver; the two last, if given with Aloes, so as to purge briskly, and particularly the Calomel, are excellent remedies; but given merely as Alteratives, they do no good.

I have generally found the following Ball very effectual, giving the preceding night from half a dram to a dram of Calomel. I have often mixed the Calomel with the Ball, and found it equally efficacious; the former method, however, is generally preferred.

Succotrine Aloes, -	6 dr.
Powdered Ginger, - -	1½ dr.
Oil of Wormwood, -	20 drops.
Prepared Natron, - -	2 dr.

Syrup enough to form the Ball for one dose.

It is often necessary to repeat this medicine, but there should always be an interval of ten days between each dose.

The third kind of Worm is of a whitish colour, frequently seven or eight inches in length, and generally found in the lower part of the small Intestines. These Worms are not so common as the other, but appear to consume a con-

siderable quantity of chyle, or the nutritious parts of the food; they may be got rid of by the same means that we have recommended for the small blackish Worm.

We may always be satisfied of the existence of Worms in the Intestines, when a whitish or light straw coloured powder is observed immediately beneath the Anus. I have sometimes succeeded in destroying Worms, by giving one dram and a half of Aloes every morning until purging was produced.

HIDE-BOUND.

This term implies a tightness of the Skin, which feels as if it were glued to the Ribs, the coat having at the same time a rough unhealthy appearance. This complaint is generally occasioned by Worms, or want of attention in the Groom; it occurs sometimes, however, without any manifest cause; in such cases give the Alterative No. 1, every morning, until moderate purging is produced, and if this does not succeed, try the Alterative No. 2, which is to be given every morning for eight or ten days, taking care to assist its operation by warm cloathing, good grooming, and regular exercise.—

I cannot forbear mentioning here a remedy that is employed in some parts of Staffordshire for this complaint, as it clearly evinces how necessary it is to rescue this valuable animal from the barbarous and absurd treatment of illiterate Blacksmiths. An account of this operation was sent me by a gentleman who saw it practised a few months ago. "The head and legs of the "Horse being secured, two men (one on each "side) pull the Hide from the Ribs in about "fifty places with pincers." The proprietor of this unfortunate animal must surely have been destitute of common sense or humanity, to allow an ignorant unfeeling Farrier to perform so cruel and fruitless an operation.

ALTERATIVE BALLS.

No. 1.

Succotrine Aloes, - -	1 oz.
Castile Soap, - - -	9 dr.
Powdered Ginger, - -	6 dr.

Syrup enough to form the Mass, to be divided into six doses.

No. 2.

Tartarized Antimony, -	$2\frac{1}{2}$ oz.
Powdered Ginger, - -	$1\frac{1}{2}$ oz.
Opium, - - - - -	$\frac{1}{2}$ oz.

Syrup enough to form the Mass, to be divided into eight Balls.

SURFEIT.

This absurd term is given by Farriers to a disease of the Skin, consisting in small tumours or knobs which appear suddenly in various parts of the body, sometimes in consequence of drinking largely of cold water, when the body is unusually warm: it appears frequently without any manifest cause. It may be easily cured by bleeding moderately, or giving a Laxative Ball; sometimes, indeed, it goes off without any medical assistance. There is another disease of the Skin of the same name, which is generally more obstinate, and attacks Horses that are hide-bound and out of condition; in this a great number of very small scabs are felt in various parts of the body; the Horse is frequently rubbing himself, and sometimes the hair falls off from those parts which he rubs. This complaint approaches to the nature of Mange, and requires the same treatment, assisted by a generous diet, good grooming, and regular exercise.

MANGE.

This disease is seldom met with, except in stables where scarcely any attention is paid to the Horses, and where their food is of the worst quality; it is certainly very contagious, and may in that way attack Horses that are in good condition. It is known to exist by the Horse being constantly rubbing or biting himself, so as to remove the hair, and sometimes produce ulceration; the hair of the mane and tail frequently falls off, and small scabs may generally be observed about the roots of that which remains. The Mange is, I believe, a *local* disease, and requires only the following Ointment or Lotion for its removal; in obstinate cases, however, it may be adviseable to try the effect of the following Alterative:

MANGE OINTMENT.

No. 1.

Sulphur Vivum, finely powdered,	4 oz.
Oil of Turpentine, - -	3 oz.
Hog's Lard, - -	6 oz.

Mix.

No. 2.

Oil of Turpentine, - - 4 oz.
Strong Vitriolic Acid, - - ½ oz.
Mix cautiously, and add
Train Oil, - - - 6 oz.
Sulphur Vivum, - - 4 oz.
Mix.

MANGE LOTION.

White Helebore, powdered, - 4 oz.
Boil in 3 pints of Water to 1 quart, then add
Muriate of Quicksilver, - 2 dr.
That has been previously dissolved in 3 drams of Muriatic Acid.

ALTERATIVE FOR MANGE.

Muriate of Quicksilver, - ½ oz.
Tartarized Antimony, - - 3 oz.
Powdered Aniseeds, - 6 oz.
Powdered Ginger, - - 2 oz.
Syrup enough to form the Mass, to be divided into sixteen Balls, one of which is to be given every morning.

Should they appear to diminish or take off the appetite, or create a purging, they must be discontinued two or three days.

GREASE.

This disease consists in an inflammation, swelling, and consequent discharge from the Heels, the matter having a peculiar, offensive smell, and the Heels being sometimes in a state of ulceration; the swelling frequently extends above the Fetlock joint, sometimes as high as the Knee or Hock. When the inflammation and swelling are considerable, apply a large Poultice to the Heels (vide Poultice), taking care to keep it constantly moist, by adding to it occasionally a little warm water; at the same time let a dose of physic be given. After three or four days the inflammation and swelling will have abated considerably, the Poultice may then be discontinued, and the Astringent Lotion applied five or six times a day. Should the Heels be ulcerated, apply the Astringent Ointment to the ulcers, and if they are deep and do not heal readily, wash them with the Detergent Lotion previous to each dressing. Regular exercise is of the highest importance, but it is necessary to choose a clean and dry situation for the purpose.

In slight cases of Grease the Astringent Lotion and a few Diuretic Balls will generally be found sufficient to effect a cure; but when the disease is of long standing, and particularly if the Horse

has suffered from it before, there will be more difficulty in its removal; in such cases the following Alterative Powder may be given in the corn every day until it produces a considerable diuretic effect; in very obstinate cases Rowels in the Thigh have been found useful. Digitalis, or Fox-glove, has been recommended in those swellings of the Legs which are the consequences of Grease; I have not yet tried its effects in this way, at least not sufficiently to give an opinion on the subject. It is a violent medicine in the Horse, very apt to take off the appetite and injure the Stomach, and must therefore be given with caution: the dose is from half a dram to one dram.

Though the Grease is most commonly occasioned either by high feeding and want of exercise, or by neglect in the Groom, there are cases which seem to depend on general debility. I do not believe that this is ever the exciting cause of the disease, but am convinced that a Horse is rendered more susceptible of it by being in a state of weakness, and that the complaint sometimes owes its continuance to this cause. When a Horse has suffered much from this disease, and particularly if he appears to be weak and out of condition, a liberal allowance of corn will tend to recover him, if assisted by the Astrin-

gent Lotion and careful grooming; in cases of this kind exercise is essentially necessary. It must be obvious that when this disease depends upon debility, a dose of physic would not be an eligible remedy, yet considerable benefit has sometimes been obtained by giving the following Alterative every morning until the Bowels are moderately opened.

ALTERATIVE BALL.

Succotrine Aloes, - - 1 oz.
Castile Soap, - - 1½ oz.
Powder'd Ginger and Myrrh, of each, ½ oz.
Syrup enough to form the Mass, to be divided into six Balls.

This medicine, though of an opening quality, will improve the Horse's strength, and at the same time promote absorption.

ALTERATIVE POWDER.

Powdered Rosin and Nitre, of each, 4 oz.
Mix, and divide into eight doses.

Nothing tends so much to prevent Grease and swelling of the Legs, as frequent hand-rubbing, and cleaning the Heels carefully, as soon as a Horse comes in from exercise. In inveterate cases of Grease, where the disease appears to

have become habitual in some degree, a run at grass is the only remedy; if a dry paddock can be procured where a Horse can be sheltered in bad weather, and fed with hay and corn, it will be found extremely convenient, as in such circumstances he may perform his usual labour, and at the same time be kept free from the complaint. In a few obstinate cases I have seen the Mercurial Alterative of service, giving one Ball every morning until the Bowels are opened.

ASTRINGENT LOTION.

No. 1.

Alum Powdered, -	1 oz.
Vitriolic Acid, - -	1 dr.
Water, - - -	1 pint.

Mix.

No. 2.

Alum Powdered, -	4 oz.
Vitriolated Copper, -	$\frac{1}{2}$ oz.
Water, - -	$1\frac{1}{2}$ pint.

No. 3.

Sugar of Lead, - -	4 oz.
Vinegar, - -	6 oz.
Water, - - -	1 oz.

Mix.

The strength of these Lotions often requires to be altered; where the inflammation and irritability of the part are considerable, they must be diluted with an equal quantity of water; but if the inflammation is subdued, and a swelling and ulceration remain, the Alum Solution cannot be made too strong.

ASTRINGENT OINTMENT.

No. 1.

Hog's Lard, - -	4 oz.
Oil of Turpentine, - -	2 dr.
Acetated Water of Litharge,	½ oz.

Mix.

No. 2.

Venice Turpentine, -	1 oz.
Hog's Lard, - -	4 oz.
Alum, finely Powdered,	1 oz.

MERCURIAL ALTERATIVE.

Calomel, - -	½ dr.
Aloes, - - -	1 dr.
Castile Soap, - -	2 dr.
Oil of Juniper, - -	30 drops.

To be made into a Ball with syrup for one dose.

ASTRINGENT POWDER.

No. 1.

Powdered Alum, -	4 oz.
Bole, - - -	1 oz.

Mix.

No. 2.

Vitriolated Zinc, Powdered Bole, of each, -	2 oz.

No. 3

Acetated Ceruss, -	2 oz.
Bole, - - -	1 oz.

Mix.

MALLENDERS AND SALLENDERS.

When a scurfy eruption appears on the posterior part of the Knee joint, it is termed *Mallenders*, and when the same kind of disease happens on the anterior of the Hock joint it is named *Sallenders*. Should these complaints occasion lameness, it will be proper to give in the first place a dose of physic; let the hair be carefully clipped off from the diseased part, and let all the the scurf be washed off with soap and warm water; a cure may then be soon effected by applying the following Ointment twice a day:

THE OINTMENT.

No. 1.

Ointment of Wax or Spermaceti,	2 oz.
Olive Oil, - -	1 oz.
Camphor and Oil of Rosemary, of each, - -	1 dr.
Acetated Water of Litharge,	2 dr.

Mix.

No. 2.

Ointment of Nitrated Quicksilver, Olive Oil, of each, } 1 oz.

Mix.

No. 3.

Oil of Turpentine, - ½ oz.
Vitriolic Acid, - - 1 dr.

Mix cautiously, and add of

Oil of Bay, - - 3 oz.

Mix.

GLANDERS.

This is a contagious disease, and has, I believe, hitherto proved incurable. The most essential thing to be known with respect to the Glanders, is the method of preventing its being communicated to sound Horses; and the appearances by which it may be with *certainty* distinguished from other diseases. The symptoms are, a discharge from one or both nostrils, and a swelling of the Glands under the Throat: if one Nostril only is affected, it generally happens that the swollen Gland is on the same side of the Throat: sometimes the disease remains in this state for a considerable time, at others

the discharge increases, becomes of a greenish colour, and very fœtid; ulceration takes place within the Nose, and the swollen Gland becomes harder, and feels as if closely attached to the Jaw bone. A cold has sometimes been mistaken for the Glanders, but may very easily be distinguished from it. In colds, there is generally a certain degree of fever, the eyes appear dull or watery, the appetite is diminished, and there is almost always a cough. If the Glands of the Throat should swell, they are not so closely attached to the Jaw bone, as in the Glanders, but feel loose and moveable under the Skin; they are also generally in a state of active inflammation, feeling hot, and softer than in the Glanders: in colds, both Nostrils are almost always affected; in the Glanders, it frequently happens that the discharge is from one only. In colds I have never seen the Nostrils ulcerated—in Glanders it always happens, though at different periods of the disease; sometimes ulceration takes place at its commencement, at others a month or two may elapse before it can be perceived. The Strangles has been sometimes mistaken for the Glanders, but in this disease the inflamed Glands very soon suppurate and burst, whereby all the other symptoms are generally removed, whilst in the Glanders the Glands

seldom or never suppurate: in order, however, to avoid all danger, it is adviseable, the moment a Horse is perceived to have a discharge from his Nose, to put him into a stable where he can have no communication with other Horses: if the Glands of the Throat are enlarged and inflamed, apply a large Poultice to them, steam the head three or four times a day, let him be well clothed, particularly about the Head, and give the Fever Powder, No. 2, every day, or once in twelve hours. Should the discharge arise from a cold, it will soon be removed by these means. When considerable ulceration is perceived in the Nose, with the other concomitant symptoms of the Glanders, the Horse should be destroyed instantly.

The most effectual mode of purifying stables in which Glandered Horses have been kept, is to remove, or carefully wash, every thing on which the Horse may have deposited any matter, and afterwards to cover every part of the stable with a thick coat of lime and size.

Though all the experiments hitherto made in order to discover a remedy for this destructive malady, seem to have proved fruitless, I can by no means agree with those who think that the subject is exhausted, and that any further attempts would be superfluous; such sentiments

may indeed be pardonable in those practitioners of the art who know nothing of the anatomy and physiology of the Horse, or the properties of medicine, and consequently can have no principles to conduct them in their experiments; but since the art has been placed on a more respectable footing, and the practice so much improved by the attention and abilities of the present Professor, we may expect that some further and more successful experiments will be made; and that ultimately we may see this truly useful animal rescued from a disease so eminently destructive.

When the Venereal Disease first made its appearance in Europe, its ravages were severely felt, and thousands fell victims to it; almost every medicine in the Materia Medica was tried without effect, and it was generally considered as an incurable disorder: had the practitioners of medicine been then discouraged by the failure of so many experiments, and given it up as an hopeless undertaking, it would have been unfortunate indeed for the votaries of the Cyprian Goddess; but by perseverance every difficulty was surmounted, and the antidote at length discovered. Though our attempts to cure the Glanders have hitherto proved ineffectual, it ought by no means to be relinquished

as a fruitless enquiry; rather indeed ought it to operate as a stimulus on the Veterinarian, and prompt him to an exertion of all his talents and ingenuity; since the more difficulty there is in the pursuit, the more honour and profit will there be attached to the discovery; there may be many steps to ascend before we can arrive at this desirable object, but he who makes any progress towards it, does a service to society: we shall not perhaps *suddenly* find out the method of curing the disease, though it may be accomplished by *gradual* and successive discoveries. From the observations I have been able to make on the Glanders, it appears generally to originate in contagion, though sometimes I believe it arises spontaneously, or from the respiration of impure air. A remarkable instance of this happened a few years since; some Horses were embarked for the Continent, during the voyage it became necessary to shut the hatchways, whereby a proper circulation of air was prevented; in consequence of this several Horses were suffocated, and those that survived were immediately attacked with the Glanders. That it arises from contagion, is proved by almost daily experience. How important therefore must it be, whenever this dreadful disorder occurs, to bear this circumstance in remem-

brance, and to employ means which may effectually prevent its spreading; and how many valuable Horses might have been saved, had the proper precautions been attended to by Grooms, and those who have had the management of Glandered Horses.

Upon considering the origin, progress, and symptoms of Glanders, a striking analogy will appear between this and the Venereal Disease. When Venereal matter is applied to a part where a mucous fluid is secreted, as in the urethra or urinary passage, or the internal surface of the Nose, a peculiar kind of inflammation is produced, and poisonous matter formed, which has the power of producing the disease in others.—If Glanderous matter is applied to the Nose of a Horse, an inflammation and discharge of matter will take place, and this matter will possess the same poisonous quality as that which produced it. When the venereal matter is applied to the Skin where the cuticle is very thin, or has been abraded, a chancre or ulcer will be produced, and the contiguous Glands will become inflamed and swollen from an absorption of the poison, which will ultimately get into the circulation, and infect the whole system: when the matter of Glanders is applied in a similar way to a Horse, it produces a Chancre, or

as it is commonly termed, a Farcy ulcer; the neighbouring glands are inflamed and swollen, the poison after a time gets into the blood, and the Horse becomes completely Glandered; having at the same time the disease termed Farcy. When venereal matter is applied to a sound part of the same subject that produced it, it is said to be perfectly harmless, so it is with the Glanderous matter; but here it must be observed, that when Glanderous matter is applied to the Skin of a Horse already labouring under the disease, although it be taken from another Horse, a Chancre is not produced. Medicines which have a considerable quantity of oxigen in their composition, and which have so weak an attraction for that element, as to part with it readily, are the remedies for the Venereal Disease, and of these the preparations of quicksilver are the most remarkable, though nitrous acid, and oxymuriate of pot-ash are said also to be antidotes to the venereal poison. I have seen the discharge and other symptoms of Glanders considerably diminished by the use of acids, and have known it removed for a time by means of mercurial preparations. The Farcy has been frequently *cured* by means of mercury, but I believe it has never been known to cure the

Glanders radically, and I have been informed that it has been very fairly tried.

From the knowledge we possess of the Glanders, we may surely be encouraged to pursue the enquiry whenever it can be done with safety; and though our experiments may not lead us to any infallible remedy for the disease, they may teach us a more certain mode of prevention than any we are now acquainted with, and may possibly enable us even to cure it in its earliest stages. It has been said that inoculation with Cow Pock matter will render a Horse unsusceptible of Glanders, but this I believe is at present merely a conjecture; the idea is certainly plausible, and the experiment ought to be made.

FARCY.

The Farcy generally appears in the form of small tumors or buds (as they are commonly termed) frequently in the course of the Veins, from which they are erroneously supposed to consist in a swelling of those vessels. These tumours generally burst, discharging a thin watery matter, and degenerating into foul spreading ulcers. The contiguous Glands are usually

inflamed and swollen from an absorption of the poison. This disease sometimes makes its appearance in diffused swellings of the hind legs, sheath, or other parts of the body. The most common cause of Farcy appears to be contagion, either from a Glandered or Farcied Horse, for there can be no doubt that those diseases *will reciprocally produce each other*; whence we may conclude that they *both* originate from the operation of the *same poison*, which produces different effects according to the parts on which its noxious influence is exerted.

There being certain parts only of the body which are obnoxious to this poison, its effects are always partial in some degree; thus we find the internal parts of the Nose particularly liable to be affected by it; the Skin likewise is very susceptible of its action, and when the Horse is suffered to live a sufficient time for the poison to acquire its highest degree of virulence, or to produce its full effect, the Lungs do not escape the contagion. The Farcy may be either constitutional or local: if Glanderous matter, or the matter taken from a Farcy ulcer is applied to the Skin where the cuticle has been torn or abraded, a Chancre or foul Ulcer is produced, which may easily be distinguished from all others by its peculiarly foul appearance, the edges

becoming thick, and the discharge consisting of a thin and rather glutinous matter, it generally spreads rapidly, and never looks red or healthy: the absorbents or lymphatics about the ulcer become inflamed and swollen from an absorption of its poisonous matter, the swellings produced in this way are commonly mistaken for veins, and hence has arisen the opinion of the blood vessels being the seat of the disease: the Glands likewise, to which those lymphatics lead, become inflamed and enlarged; at length small tumours or *buds* appear in the course of these absorbents, which are small abscesses arising from the inflammation of those vessels.

Thus far the disease is certainly *local*, and the constitution untainted; the poison being arrested by the Glands, and for a time prevented from mixing with the blood; at length however it insinuates itself into the circulation, and poisons the whole mass. Those parts which are susceptible of its action will then be affected, though at different periods. The internal parts of the Nose are generally the first to be attacked; that delicate membrane by which they are lined becomes inflamed and ulcerated, discharging large quantities of matter: the next part which is affected is generally the Skin, on various parts of which *Farcy buds* (as they are termed) make

their appearance and degenerate into foul spreading ulcers; at length the bones of the Nose become carious or rotten, and finally the poison falls upon the lungs, and very soon puts a period to the sufferings of the unfortunate animal.—Sometimes the progress of the disease is extremely rapid, and destroys the Horse in a very short time; at others it is remarkably slow, and continues in the same state for a considerable time, without affecting either the appetite or strength.

In the first stage of the Farcy, while it is perfectly local, a cure may be easily accomplished, and should the disease be discovered quite at its commencement, topical applications alone will be sufficient to remove it; and if indeed the actual cautery is *freely* applied at this time, so as to destroy the whole of the poisoned parts, the disease will be *completely eradicated*, and the Chancre converted to a common sore; this will soon be evinced by the remarkable change that may be observed in its appearance; as soon as the slough comes off, instead of looking foul, it will have a red healthy appearance, the matter will become white and thick, the healing process goes on rapidly, and the cure is soon completed, merely by the application of digestive ointment. Should the disease however

have been neglected, or not perceived at its commencement, should the lymphatics be enlarged or *corded*, (as it is termed by Farriers) and the neighbouring Glands swollen, the cure is by no means so certain, in that case some of the poison may have got into the circulation, though its effects have not been visible: even in this stage however the *Chancre* may be completely cured by the actual cautery, or other strong caustics, and if the poison should not have passed the Glands, the cure will be radical—but if, on the contrary, the smallest portion of the poison should have insinuated itself into the blood, the whole mass will be poisoned, and the symptoms we have before described will successively take place.

Whenever therefore the Farcy has been neglected at its first appearance, it will be adviseable to give the following Ball, once, twice, or even three times a day, if the Horse's strength will admit of it; taking care to restrain its inordinate effect upon the Bowels or Kidneys by means of Opium; at the same time it is necessary to keep up the Horse's strength by a liberal allowance of corn; Malt has been found useful also on those occasions. During the time the Horse is taking this strong medicine, great attention must be paid to him, he must be

warmly cloathed, have regular exercise, and never be suffered to drink cold water. Verdigris has been much recommended in this disease, but I have never had an opportunity of seeing its effect.

The following Balls indeed have proved so efficacious, that I have seldom had occasion to try other remedies; unless however they are given for two or three weeks after every symptom has been removed, the cure will seldom be permanent. It seems probable that the Farcy as well as the Glanders arises sometimes spontaneously, tho' not so frequently as it is supposed. I have seen many cases where the disease could not be traced to any source of infection, still however, it might have arisen from contact with poisonous matter, for it is not necessary that the matter should be conveyed immediately from one Horse to another, in order to produce the disease; which is often communicated by means of matter deposited upon the manger, or litter, or about the rack; and it is not improbable that it is sometimes conveyed by the hands of those who have the management of such Horses, through inattention or negligence.

With respect to that kind of Farcy which appears in the form of diffused swellings of the limbs or other parts, I believe it seldom origi-

nates from infection, and does not often depend perhaps on the action of the Glanderous poison, being merely common œdematous swellings, such as accompany the Grease; from this we may account for the efficacy that has sometimes been attributed to Purgatives and Diuretics, as remedies for the Farcy. It has been said that the Grease sometimes degenerates into Farcy, and becomes contagious, but this I have never seen.

When large abscesses form in consequence of Farcy, they do not require any peculiar treatment, but it is particularly necessary to support the Horse's strength in those cases by means of corn and malt. It has been supposed that the Farcy depends altogether upon debility, and medicines of the Tonic or strengthening kind have been recommended for its removal.

BALL FOR FARCY.

Muriate of Quicksilver,	-	1 sc.
Powdered Aniseeds,	-	½ oz.

Syrup enough to form the Ball.

The quantity of Muriate of Quicksilver may be gradually increased, as far as the Horse's strength will allow. When violent sickness, purging, or excessive staling is produced by it,

it will be adviseable either to discontinue it for two or three days, or to diminish the dose considerably. One dram of Opium will sometimes prevent such violent effects.

CHAPTER IV.

Wounds.

THE first necessary operation in Wounds is to remove carefully all dirt or other extraneous matter, and if the Wound be made with a clean cutting instrument, and not complicated with bruising or laceration, the divided parts are to be neatly sewed together; and, where it can be done, a roller kept constantly moist with the Saturnine Lotion, diluted with an equal quantity of water, is to be applied, in order to assist in retaining the parts in their situation; this roller is not to be removed for several days, that the divided parts may have time to unite, and that the Wound may heal by the first intention, as Surgeons term it, unless considerable swelling and inflammation come on, it then becomes necessary to remove the roller, and apply fomentations. This kind of union, however, can seldom be accomplished in Horses, from the difficulty of keeping the wounded parts sufficiently at rest, and from their wounds being generally accompanied with contusion or laceration;

yet it should be always attempted where it appears at all practicable. Fomentations and warm digestives then become necessary, in order to promote the formation of matter in the Wound: should considerable swelling and inflammation arise, moderate bleeding near the affected part, and laxative medicines, or even a dose of physic are strongly to be recommended, and a Poultice, if the situation of the part be such as to admit of its application, will be found of great use. As soon as the swelling and inflammation shall have been removed, the Fomentations and Poultice are no longer necessary, and the Digestive Ointment only is to be applied: should the Wound appear not disposed to heal, discharging a thin offensive matter, apply the Detergent Lotion previous to the Digestive Ointment. When the granulations become too luxuriant, that is, when, what is commonly termed proud flesh, makes its appearance, the Caustic Powder is to be sprinkled on the wound—slight wounds generally heal with very little trouble, and sometimes without the interference of art; and it is from this circumstance that many nostrums have acquired unmerited reputation: in Wounds of this kind, Tincture of Myrrh, or Compound Tincture of Benzoin may be used.

Whenever a considerable blood-vessel is wounded, and the hemorrhage is likely to prove troublesome, our first object is to stop the bleeding, which, if the Wound be in a situation that will admit of the application of a roller or bandage, may be easily effected, for pressure properly applied is generally the best remedy on those occasions, and far more effectual than the most celebrated styptics: in some cases it becomes necessary to tie up the bleeding vessels; this is rather a difficult operation, and not often necessary.

Punctured Wounds, or such as are made with sharp-pointed instruments, are generally productive of more inflammation than those that have at first a more formidable appearance; and if such Wounds happen to penetrate into a joint, or the cavity of the Chest or Belly, the worst consequences are to be apprehended, unless it be skilfully treated.

When a joint has been wounded, the Synovia or Joint-Oil may be observed to flow from the Wound; the first thing to be done in these cases, is to close the opening that has been made into the joint, for as long as it remains open the inflammation will go on, increasing, and the pain will be so violent as to produce a sympto-

matic fever, which has often proved fatal: the most effectual method of closing the wound is by applying the actual cautery; this will appear probably a very strange remedy to those who have not seen its effect, yet it is certainly the most efficacious that can be employed, but is only applicable where the Wound is of the punctured kind, and small; for when a large Wound is made into the cavity of a joint, and particularly if it is of the lacerated kind, it is impossible to close it effectually, and death is frequently the consequence. As soon as the opening has been closed, it is of consequence to guard against the inflammation that may be expected to arise, or to remove it if already present—for this, bleeding and purging are the most effectual remedies—a Rowel in any convenient part near the affected joint will be found useful also. Should the joint be swollen much, the Blister, No. 2, will prove very efficacious, and far superior to Fomentations or Poultices.

Wounds about the Foot, from stubs, overreaching, &c. often prove troublesome when neglected; as soon as they are perceived, care should be taken that no dirt gets into them—the Detergent Lotion and Digestive Ointment are the most useful applications on those occasions. When the Foot is wounded in shoeing, the nails

No. 2.

Tincture of Cantharides,	-	1 oz.
Oil of Origanum,	- -	2 dr.
Camphorated Spirit,	-	6 dr.

Mix.

No. 3.

Muriate of Ammonia,	-	1 oz.
Distilled Vinegar,	- -	8 oz.
Spirit of Wine,	- -	6 oz.

Mix.

FISTULA IN THE WITHERS.

This disease generally originates in a bruise from the saddle, and is at first simply an Abscess, which by early attention and proper treatment may be easily cured; but when neglected it degenerates into a fistulous sore, proves extremely difficult of cure, and cannot be removed without very severe treatment.

As soon as the injury is discovered, Fomentations should be applied in order to promote suppuration, and when matter is formed let the tumor be opened, so that its contents may be

completely evacuated, and a future accumulation prevented; the sore may then be healed by dressing it daily with Digestive Liniment or Ointment, but should they prove ineffectual, apply the Detergent Lotion until the sore assumes a red healthy appearance, and the matter becomes whiter and of a thicker consistence. When the disease has been neglected in its first stage, and the matter has been suffered to penetrate among the muscles, affecting the Ligaments or Bones of the Withers, it becomes *necessary* to adopt a more severe treatment. The Sinusses or Pipes are to be laid open with a knife, and if it is practicable, a depending opening is to be made, that the matter may run off freely; the sore is then to be dressed with the following Ointment, which is to be melted and poured into the cavity while very hot.

The sore is not to be dressed, until the sloughs which this Ointment occasions, have separated from the living parts; which generally happens two or three days after the operation. If the surface of the sore looks red and healthy, and if the matter appears to be whiter and of a better consistence, a repetition of this painful operation will not be required; the Digestive Liniment or Ointment being sufficient to complete the cure; but if the sore still retains an unheal-

thy appearance, and the matter continues thin and of a bad colour, the hot dressing must again be applied.

THE OINTMENT.

No. 1.

Ointment of Nitrated Quicksilver,	4 oz.
Oil of Turpentine, - -	1 oz.

Mix.

No. 2.

Verdigris, - - - -	½ oz.
Oil of Turpentine, - - -	1 oz.
Ointment of Yellow Resin, -	4 oz.

Mix.

POLL EVIL.

This disease like the preceding one, generally originates in a bruise, and if neglected, requires the same severe treatment: it consists at first in an Abscess in the Poll, which by early attention might be easily cured; but if the matter is suffered to penetrate to the Ligaments and Bones, it frequently proves more difficult of cure than the Fistula in the Withers.

Mr. Taplin, in his Stable Directory, very pompously declaims against this method of

treating inveterate cases of Fistula and Poll Evil; it is certainly, however, the only effectual one that is known; and had this verbose author but seen the effect of this remedy, as well as of that which he recommends himself, before his book was written, it is probable he never would have favoured the public with the declamation above alluded to. It is surely more consistent with humanity to rescue an animal from a painful and gradually increasing disease, by means of a severe operation, than to suffer him to linger out a life of pain and misery, by adopting a mild, but inert mode of treatment.

SADDLE GALLS OR WARBLES.

These consist of inflamed Tumors, and are produced by the unequal pressure of the Saddle; if neglected they become troublesome sores, and are often a considerable time in healing. As soon as a swelling of this kind is observed, let several folds of linen be moistened with one of the following Embrocations, and kept constantly applied to the Tumor until it is reduced; but if matter has been allowed to form, let it be opened with a lancet, and afterwards dressed with Digestive Liniment or Ointment. Should it

appear not to heal readily under this treatment, apply the Detergent Lotion made hot. When swellings of this kind are large and much inflamed, it will be adviseable to bring them to suppuration as expeditiously as possible, by means of Fomentations or Poultices. Should a hard swelling remain after the inflammation is in great measure removed, try the Embrocation for strains, and if that does not succeed, recourse must be had to a Blister.

THE EMBROCATION.

No. 1.

Water of Acetated Litharge,	2 dr.
Distilled Vinegar, -	3 oz.
Spirit of Wine, - -	4 oz.

Mix.

No. 2.

Muriate of Ammonia, -	½ oz.
Muriatic Acid, - -	2 dr.
Water, -	from 8 to 12 oz.

Mix.

No. 3.

Soap Liniment and Water of Acetated Ammonia, of each,	2 oz.

Mix.

SITFASTS

Are occasioned by repeated bruises from the Saddle, which instead of inflaming the Skin, as most commonly happens, causes it to become callous, and gives it somewhat the appearance of leather. The following Ointment is to be applied until the callous part appears disposed to separate, it is then to be removed, which generally requires some force, and the sore which remains may be healed with Digestive Liniment or Ointment.

OINTMENT FOR SITFASTS.

Ointment of Althea, -	4 oz.
Camphor, - -	2 dr.
Oil of Origanum, -	1 dr.

Mix.

STRAINS.

This is a subject with which every Sportsman ought to be well acquainted, since his Horses are particularly liable to such accidents. Strains may affect either the Muscles, Ligaments, or Tendons. Muscular Strains consist in an inflammation of the Muscles or Flesh, occasioned

by violent and sudden exertion. When Ligaments are the seat of this disease, there is generally some part of them ruptured, whereby very obstinate and sometimes permanent lameness is produced; in this case also inflammation is the symptom which first requires our attention: but Tendons are the parts most frequently affected, particularly the Flexors of the fore Leg or back Sinews as they are commonly termed.—Tendinous Strains are commonly supposed to consist in a relaxation or preternatural extension of the Tendon, and the remedies that have been recommended, are supposed to brace them up again; however plausible this opinion may be, it is certainly very erroneous; indeed it has been proved by experiment that Tendons are *neither elastic nor capable of extension*, and from investigating their structure and œconomy, we learn, that were they possessed of these qualities they would not answer the purpose for which they were designed. From an idea that a Strain in the back Sinews depends on a relaxation of the Tendons, many practitioners have been apprehensive of danger from the use of emollient or relaxing applications, than which nothing can be more useful at the beginning of the disease.

Tendinous Strains consist in an inflammation of the Membranes, in which Tendons are enveloped, and the swelling which takes place in those cases depends on an effusion of coagulable Lymph, by the vessels of the inflamed part. Inflammation being the essence of a Strain, we are to employ such remedies as are best calculated to subdue it, and should any swelling remain, it is to be removed by stimulating the absorbent vessels to increased action.

STRAIN OF THE SHOULDER.

This disease is by no means so frequent as it is supposed to be, lameness in the Feet being often mistaken for it; the difference, however, is so well marked that a judicious observer will never be at a loss to distinguish one from the other.

A Shoulder Strain is an inflammation of some of the Muscles of the Shoulder, most commonly, I believe, those by which the limb is connected with the body. The lameness which this accident occasions comes on rather suddenly, and is generally very considerable.—When the Horse attempts to walk, the toe of

the affected side is generally drawn along the ground, from the pain which an extension of the limb occasions; in violent cases he appears to be incapable of extending it.

When lameness arises from a disease of the Foot, it is generally very gradual in its attack, unless occasioned by an accidental wound, and does not at all hinder the extension of the limb; an unusual heat and tenderness may also be perceived in the Foot, and as the Horse stands in the Stable, the affected Foot will be put forward, that it may bear as little as possible of the weight of the body.

The first remedy to be employed on those occasions is bleeding in the Shoulder or Plate Vein, then give a Laxative Ball, and if the injury is considerable, let a Rowel be put in the Chest; by means of these remedies and rest, the disease will generally be removed in a short time; a cooling opening diet, with perfect rest, will also be necessary. When the inflammation and lameness begin to abate, the Horse should be turned into a loose stall, and after a week or two he may be suffered to walk out for a short time every day, but should this appear to increase the lameness, it must be discontinued.—The intention of moderate exercise, after the

inflammation is in great measure subdued, is to effect an absorption of any Lymph that may have been effused, and to bring the injured Muscles gradually into action. After an accident of this kind, particularly when it has been violent, the Horse should not be rode or worked in any way for a considerable time, as the lameness is very apt to recur unless the injured parts have had sufficient rest to recover their strength; if he can be allowed two or three months grass, it will be found extremely useful, provided he is prevented from galloping or exerting himself too much when first turned out; it is necessary also to choose a situation where there are no ditches in which he may get bogged. With respect to Embrocations and other external applications, they are certainly useless, unless the *external* parts are affected, and then Fomentations may be employed with advantage.

STRAIN OF THE STIFLE.

In this case the Stifle joint will be found unusually hot, tender, and sometimes swollen. The remedies are Fomentations, a Rowel in the Thigh, and a dose of physic. When by these means the inflammation of the joint has abated

considerably, and at the same time the swelling and lameness continue, the Embrocation for Strains, or a Blister, should be applied. Strains in the Hock joint require the same treatment.

STRAIN OF THE HIP JOINT,

(Commonly termed Whirl Bone or Round Bone)

When lameness occurs in the hind Leg, the cause of which is too obscure for the Farrier's comprehension, he generally pronounces it to be a Strain in the Round or Whirl Bone, and with all that affectation of infallibility, so commonly observed in those gentlemen: I have seen several cases of lameness which were supposed to depend upon an injury of this part, but on an attentive examination, an incipient Spavin was found to be the cause. I would advise therefore in all such cases, that the Hock joint be carefully examined, and if any unusual heat or tenderness be observed on the seat of Spavin, it is probable that the lameness arises from that cause, and that it may be removed by the application of a Blister. I have met with several Horses that have been severely burnt and Blistered in the Hip, when the Hock has been evidently the seat of the disease.

STRAIN OF THE FLEXOR TENDONS OR BACK SINEWS.

A Strain of the back Sinews depends, as we have before observed, on an inflammation of the Membranes in which they are enveloped, and is sometimes complicated with a rupture of the Ligaments which are situated immediately under the Sinews. When the lameness and swelling are considerable, bleed in the Shoulder Vein, and give a dose of physic; then let the Saturnine Poultice be applied so as to extend from the Hoof to the Knee, and let it be frequently moistened with the Saturnine Lotion. —When the inflammation and lameness have abated considerably, and a swelling still remains, apply the Embrocation for Strains, rubbing it well on the part twice or three times a day; if this does not succeed, recourse must be had to a Blister; it will be adviseable also to turn the Horse loose into a large Stable or Barn, and to give him this kind of rest for a considerable time: should he be worked too soon after the accident, the part is very liable to be injured again, particularly when it has been violent. Should the swelling continue, notwithstanding these remedies have been carefully

employed, particularly if it feel callous and hard, and it be perfectly free from inflammation, it will be necessary to apply the actual Cautery (vide Firing); this operation, however, must never be performed while any inflammation remains. These swellings sometimes prove so obstinate, that even repeated Blistering and the actual Cautery prove ineffectual; as soon, however, as the inflammation which caused them is completely removed, they seldom occasion lameness, yet they will not admit of any violent exertion in the part, and are therefore always an impediment to speed.

SATURNINE LOTION.

Acetated Lead, - -	4 oz.
Vinegar and Water, of each,	1 pint.

Mix.

SATURNINE POULTICE.

Fine Bran, - - -	¼ peck.

To be made into a thin paste with hot Saturnine Lotion; to this add as much Linseed Meal as will give it a proper consistence.

EMBROCATION FOR STRAINS.

No. 1.

Oil of Rosemary and Camphor, of each,	2 dr.
Soft Soap,	1 oz.
Spirit of Wine,	2 oz.

Mix.

No. 2.

Soft Soap, Spirit of Wine, Oil of Turpentine, and Ointment of Elder, of each,	4 oz.

Mix.

RING BONES

Are bony excrescences about the small Pastern Bone near the Coronet, or in an ossification of the Cartilages of the Foot (vide Anatomy of the Foot); if it be observed in its incipient state, a Blister will probably be of service; but when of longer standing and large, the actual Cautery will also be necessary: this remedy, however, is by no means uniformly successful, the complaint being frequently incurable, and if it has proceeded so far as to cause a stiff joint, there is no chance of recovery.

THOROUGH PIN.

By this term is meant a swelling both on the inside and outside of the Hock joint. When one of the Tumors is pressed with the fingers, the fluid which it contains is forced into that on the opposide side—from this communication between the two swellings the disease has probably obtained its name.

It is generally a consequence of hard work, and therefore difficult to cure; the only remedies are Blisters and rest.

WINDGALLS

Consist in an enlargement of the mucous sacs, which are placed behind the Flexor Tendons for the purpose of facilitating their motion. The swelling appears on each side the back Sinew, immediately above the Fetlock joint; if punctured they discharge a fluid resembling Joint Oil, indeed they frequently communicate with the cavity of the joint, and therefore cannot be opened without danger of producing an incurable lameness. Blisters are the only applications likely to be of service, and these seldom effect a cure unless assisted by rest. This com-

plaint does not often occasion lameness, and is therefore seldom much attended to; but as it is almost always a consequence of hard work, and often renders a Horse unfit for much labour; it diminishes his value considerably.

I have sometimes applied rollers or bandages to the Legs with good effect, keeping them constantly moist with the following embrocation:

Muriate of Ammonia, -	1 oz.
Muriatic Acid, - - -	½ oz.
Water, - - - -	1 quart.

Mix.

SPLENTS

Are bony excrescences about the Shank-bone, *i. e.* between the Knee and Fetlock joint; they never occasion lameness, unless situated so near the Knee or back Sinews as to interfere with their motion.

I have met with several cases of lameness that were attributed to Splents, when the cause evidently existed in the Foot.

These excrescences may sometimes be removed by strong Blisters; but the old method of bruising and puncturing the part before the Blister is applied, seems to be most effectual.

SPAVIN.

A Spavin is a swelling on the inside of the Hock, and is of two kinds; the first is termed a *bone* Spavin, consisting of a bony excrescence; the other a *bog* or *blood* Spavin. The former often occasions lameness just before it makes its appearance, and then can be discovered only by feeling the part, which will be found unusually hot and tender; if a Blister is applied at this period of the disease, it will generally prove successful; but when the disease has existed for some time, the cure is much more difficult; in such cases the actual Cautery should be applied, and the following day a strong Blister; after this two or three months rest (at grass) are absolutely necessary.

The *bog* Spavin does not so often occasion lameness as the other, except when a Horse is worked hard, which generally causes a temporary lameness, removable by rest; but it does not often admit of a *radical* cure, for though it is frequently removed by two or three Blisters, it generally returns when the Horse is made to perform any considerable exertion.

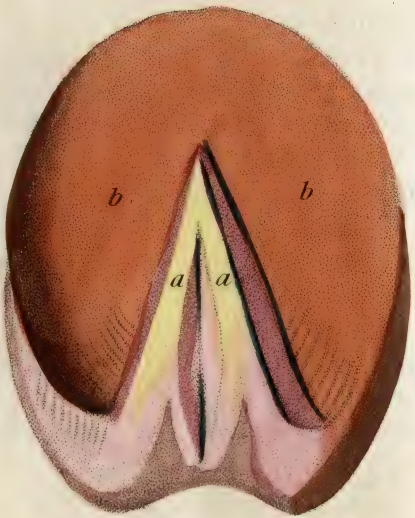
Tying up the Vein which passes over the inside of the Hock has been considered the most effectual remedy, from a supposition that the

lameness depended on an enlargement of that vessel; this operation, however, cannot be necessary, since it has been proved that the enlargement of the Vein is always an *effect*, and not a *cause* of the disease.

CURB.

This term implies a swelling on the back part of the Hock, which sometimes occasions lameness. Blistering and rest are the only remedies; it is frequently necessary, however, to apply two or three Blisters before the swelling is perfectly reduced.

Plate 6th. Fig. 2.



Neele sc. 352 Strand.

Published March 22, 1802, by J. Badcock, Pater noster Row.

CHAPTER V.

Anatomy and Physiology of the Foot.

OF all the diseases to which Horses are liable, there are none more difficult of cure, or that occur so frequently, as these which attack the foot; and however improbable it may appear to those who have not paid much attention to this subject, it is an incontrovertible fact, that almost all of them are the consequence of bad shoeing and improper management of the Foot.

No one can be aware of the importance of this branch of the Veterinary Art, but he who has had frequent opportunities of seeing those diseases, and has taken the trouble to enquire into their causes; and such a man will be convinced that nearly half of the Horses that become unserviceable, are rendered so by some defect in the Feet; and he will find that such defects are most commonly occasioned by a bad method of shoeing; therefore it must surely be of importance to every man who values his Horse, to acquire such a knowledge of this subject, as

may enable him to preserve so useful an animal from a multitude of diseases.

The bad effects which arise from the common practice of shoeing are so gradual, that we can easily account for their having been so generally overlooked: the gradations between soundness and absolute lameness are so numerous, that it has been found rather difficult to trace the disease back to its source; and this cannot be done readily without having some knowledge of the structure of the Foot, and the particular uses of the various parts which compose it. It is necessary also to be well acquainted with the natural form of the Foot, in order to determine how far it has been altered or destroyed by any plan of shoeing; for example, take a Horse that has a sound well-formed Foot, let it be improperly pared, and let bad shoes be applied, in all probability lameness will not be the immediate consequence; by a repetition, however, of this practice, it will be found that the original shape of the Foot is gradually altered, and that eventually it will be so far deformed as to produce perhaps incurable lameness; therefore we ought not to be satisfied with a plan of shoeing, merely because a Horse is not immediately made lame by it, but should examine also the

effect produced by it upon the shape and structure of the Foot; and this rule may invariably be depended on, that any mode of shoeing and treating the foot, which has a tendency to alter the form given to it by nature, is highly absurd and destructive; while that practice which tends to preserve its original form, is founded upon sound and rational principles.

It has been very justly observed, that if w wish to examine a perfect Foot, such as nature made it, it is generally necessary to find one that has never been shod; for the common mode of shoeing is so frequently destructive, that we seldom meet with a Horse whose feet have not lost, in some degree, their original form; and this deviation from their natural shape, is generally proportioned to the length of time he has worn shoes. From this circumstance, writers on Farriery have been led to form various opinions respecting the most desirable form for a Horse's Foot; but had they consulted NATURE, this variety of opinion would not have existed—they would have been convinced, that the Feet of all Horses that have not been taken from a state of Nature, or improperly shod, are nearly of the same shape; and surely no one will dispute that this form which the Creator has given it, is the most perfect, and far better adapted to

all the purposes for which the animal was designed, than any that can be given by the most ingenious Farrier.

A person unacquainted with the anatomy of the Horse's Foot, would naturally suppose that the internal parts are simply inclosed by the hoof, and that by its hardness it served to protect them from the blows and pressure to which they would otherwise be constantly exposed; but very little reflection would convince him how incomplete and inadequate such a protection would be; let him consider that those internal parts are replete with blood-vessels and nerves, and possessed of a high degree of sensibility: let him consider also, what an immense weight is thrown upon them at every step, and what painful concussion must be occasioned to the animal, were this the only safeguard against it; but Nature, ever provident, has so constructed this part as to obviate all those inconveniences: if we examine any part of the animal œconomy, we are astonished at the infinite wisdom that is displayed in it; it is not however too much to assert, that the structure of the Horse's Foot is strikingly beautiful and curious; here we find a variety of wonderful contrivances to prevent any painful concussion, from the most violent exertions, or from carrying heavy burthens;

but such is the folly and obstinacy of Farriers, that they frequently destroy or pervert the whole of this beautiful mechanism, and the poor animal is doomed to painful labour, or perpetual lameness.

It would not be consistent with the objects of this book, to give an elaborate description of the anatomical structure of the Horse's Foot; but it will be essentially useful to give such an explanation of it, as will enable the reader fully to comprehend the principles of shoeing, and the method of preserving the feet, from many troublesome and incurable diseases.

The Horse's Foot is made up of a great variety of parts, some of them possessing blood-vessels and nerves, like other parts of the body, and highly sensible; others are composed of dead horney substance that is perfectly destitute of feeling. All the *external* parts of the Foot, which, when taken together, are termed the *Coffin* or *Hoof*, are composed of this horney substance, which is not only very hard, but is possessed also of a considerable degree of toughness and elasticity, which render it extremely durable, and well calculated to protect the sensible parts which it encloses.

The Hoof consists of the *Wall* or *Crust*, the *Sole*, the *Frog*, and the *Bars*; the upper part

of the *Crust*, where it is connected with the Skin, is termed the *Coronet*, the lower part in front; the *Toe*, the sides of the Crust are named the *Quarters*, the Quarters terminate in the *Heels*, and the Heels are connected with the *Frog*. The Crust grows from the Coronet, and instead of taking a perpendicular direction becomes oblique in its descent, whereby it acquires a conical figure, being considerably wider at the basis than at the Coronet; but this description of the Hoof applies only to the healthy Foot, that has not been improperly treated, for when the Bars have been cut away, and the Frog mutilated and prevented from receiving pressure, the Heels will contract, or approach each other, and the shape of the foot will be considerably altered.

When we examine a Hoof that has been recently separated from the Foot, an immense number of small orifices or pores may be observed in that groove, which is found on the inside of the Coronet; into these orifices the extremeties of those vessels are inserted, which secrete the horney matter, the whole of which appears to be pervaded by a fine fluid, serving to prevent brittleness, and to preserve in the hoof a proper degree of elasticity.

All the internal surface of the Crust, except the groove we have just mentioned, is covered by a beautiful membranous or laminated substance, which very much resembles the under surface of a mushroom; these are united, or rather interwoven, with similar laminæ or membranes, which cover all the anterior and lateral surfaces of the sensible Foot, forming a very secure union between the crust and the internal parts, nor are these membranes possessed merely of great strength; they possess likewise a considerable degree of elasticity, constituting one of those curious springs which nature has provided to prevent concussion when the animal is in motion; that these laminæ form an union between the crust and sensible Foot, of sufficient strength to support the animal's weight, has been proved beyond a doubt, by removing from a living Horse the bottom of the Hoof, that is, the Sole and Frog: in this case, had the laminæ been unable to support the Horse's weight, the internal Foot must have slipped through the Hoof so as to come down upon the ground, but this did not happen, and the sole, as it was re-produced, assumed its proper concave form.

As these laminæ form so secure an union between the crust and the internal foot, it is evident

that the weight of the Horse is in great measure supported by the crust, which therefore ought to possess considerable strength, for if it were too weak and flexible, it would not be adequate the burthen which it has to sustain, and must consequently bend to it; in this case the Hoof would lose that oblique form which it had originally, and would approach the horizontal line, (See Fig. 1 and 2. Plate 4) at the same time, the Sole would lose its concave form, from receiving an unusual degree of pressure, becoming flat, and at length convex or projecting (See Fig. 3. Plate 4.); but when the crust is sufficiently strong, the internal Foot, and consequently the whole animal is suspended by those elastic membranes, as a carriage is by its springs; and though the bottom of the internal Foot is in contact with the sole, it nevertheless does not press upon it considerably, except when the Horse is in motion, and then the back part of the Sole descends a little (being somewhat elastic), and suffers the laminæ to elongate in a small degree, so as to prevent any painful concussion.

The bottom of the Hoof is formed by the Sole, the Frog, and the Bars.

The Sole is rather concave or hollow on its external surface, and consists of a different kind

of horn from that which forms the crust, being of a scaly texture, and sometimes soft and pulverable on its exterior surface; its use is to defend the sensible Sole that lies immediately under it: from its concave form the Horse is enabled to tread more firmly on the ground, and the sensible parts are less exposed to blows or pressure than they would be, had it been made either flat or convex; and being somewhat flexible and elastic towards the heels, it assists in the action of those curious springs we have just described.

The Frog is a very important part, and requires to be particularly considered; it is intimately united with the sole, but is composed of a tougher and more elastic kind of horn; it resembles a wedge in its form; but towards the Heel, where it becomes wide and expanded, there is a separation in the middle which is continued to the Heel: when the Frog receives the pressure of the Horse's weight, this separation is incseased, and consequently the Frog becomes wider, and as it is connected with the Heels of the Crust, the same effect must be produced upon them.

As great part of the Frog is placed behind the Coffin Bone, all the intervening space between it and the back Sinew being filled with a fatty

elastic substance, it forms another of those curious springs which nature has provided to prevent concussion.

When the Frog is in contact with the ground, it is evident, from its connection with the Heels of the Crust, as we have before observed, and with two cartilages or elastic bodies, which are covered in great measure by the Heels and Quarters of the Crust, and belong to the internal Foot, that it must tend to widen or expand the Heels, and however they may be disposed to contract, by the Foot being kept hot and dry, such contraction cannot possibly take place while the Frog bears on the ground, because it is then opposed by a very considerable part of the animal's weight.

It has been supposed by some, that the principal use of the Frog is to serve as a cushion and point of support to the back Sinew. When we consider, however, the structure and relative situation of those parts, this opinion does not appear to be very probable. From what has been said of the Frog, the reader may judge of its importance, and how necessary it is to attend to its preservation; but such is the mutilating practice of Farriers, so determined do they seem on all occasions to act in opposition to Nature, that this essential part is generally the *first* that is destroyed or rendered useless.

The *Bars* form two ridges, one on each side the Frog, extending from the Heel of the Crust towards the Toe of the Frog; they appear to be a continuation of the Crust, being like it, composed of strong longitudinal fibres; at the part where it joins the Crust a very firm bearing is afforded for the Heel of the Shoe. (See Fig. 2. Plate 1.) The use of the Bars is to *oppose* any disposition there may be in the Hoof to contract, by acting as props to the Heels; but in the common practice of shoeing they are generally destroyed, for Farriers have supposed that they bind the heels together and prevent their expansion; they have therefore named them *Binders*, and cut them away in order to open the Heels, as they term it; this practice, however, is not now so frequent as it used to be. (See Fig. 2. Plate 1 and 6.)

Having finished our description of the Hoof, we shall proceed to describe the *internal* or *sensible Foot*, which is represented in Fig 1, Plate 6,* as it appears when recently taken from the Hoof, the arteries having been injected with red coloured wax.

All the parts, of which the internal Foot is composed, are, as we have before observed, endued with great sensibility; and so nicely is it adapted to the cavity of the Hoof, that it com-

* Frontispiece.

pletely fills it, without suffering the least inconvenience from pressure; but when the Foot has been improperly treated, when the Frog has been deprived of its hard surface, for the purpose of giving it what Farriers conceive, a neat and fashionable appearance, (as if nature had been so clumsy in this part of her work, as to require a polish from the hands of those ingenious gentlemen) when the Frog has been thus mutilated, the Bars destroyed, and Shoes applied that are either turned up or made very thick at the Heels, and when this shoe, for the purpose of saving trouble, has been applied to the Foot nearly *red* hot; in such circumstances the Hoof must necessarily contract, whereby its cavity will be diminished, so that the Nerves and Blood-vessels will be compressed, the circulation of the Blood impeded, and inflammation and lameness will most probably be the consequence.

All the anterior and lateral surfaces of the sensible Foot are covered with that membranous or laminated substance which we have before described; but it differs from those laminæ which are found on the internal surface of the Crust, in possessing numerous Blood-vessels, which can be easily demonstrated by injecting coloured wax into the trunk of the arteries; but the

laminæ of the *Crust* cannot be made to appear vascular even by the finest injection, and are therefore supposed to be insensible. At the upper part of the sensible Foot, where the laminæ terminate, a roundish projecting body may be observed, extending all round the Coronet to the back part of the Frog, this is termed the Coronary ring, its surface is covered with the extremities of vessels, which are very conspicuous when the arteries have been injected with coloured wax or size, it is from this part that the Hoof is formed.

The bottom of the internal Foot is formed by the sensible Frog and Sole, the former perfectly resembles in shape the horney Frog, to the concavities of which its convexities are nicely adapted. In describing the horney Frog, we had occasion to mention its connection with two elastic bodies or cartilages, that are in great measure covered by the Heels and Quarters of the Hoof; but this connection is, through the medium of the *sensible Frog*, which is more immediately united to those cartilages. When the former comes in contact with the ground, and receives the pressure of the Horse's weight, the latter is forced upward and rendered wider, and at the same time the cartilages are forced upward and outward, tending thereby to expand the

Heels and Quarters, and assisting in taking off concussion. From the sensible Frog and Sole the horn which composes the external Frog and Sole is secreted; for this purpose they are supplied with numerous Blood-vessels, the extremities of which may be seen upon their surface, and become very conspicuous when the arteries have been injected with coloured size. Hence we are enabled to account for Thrushes, and that rottenness of the Frog which generally accompanies that disease: for when the sensible Frog is compressed and inflamed by a contraction of the Heels, it becomes incapable of performing its principal function, that is, the secretion of horn; and the blood which should have been applied to this purpose, is chiefly expended in forming that offensive matter discharged in Thrushes; from this we may learn also the cause of that unnatural thinness in the Soles of Horses that have pummice or flat feet. When the Crust gives way to the pressure of the Horse's weight, allowing the internal Foot to bear so upon the Sole as to render it either flat or convex, the extraordinary pressure which the sensible Sole receives, inflames it and impedes in a greater or less degree the secretion of horn.

The sensible sole lies immediately under the horney Sole, by which it is defended from blows

or pressure. When the horney Sole loses its concave form, and becomes thin and incapable of performing its function, if flat Shoes were applied, or if the Sole were suffered to bear upon the ground, lameness would be the consequence; and it is for the purpose of preserving the Sole from pressure, that the concave or hollow Shoe is employed in those cases. When these parts which we have described are removed from the sensible Foot, the Tendons, Ligaments, and Bones come into view.

In Plate 9th is a front view of the Bones, Tendons, and Ligaments; and in this view the Lateral Cartilages may be observed, which we have before mentioned, as tending, from their connection with the Frog, to expand the Heels and Quarters.

In Plate 10th is a back view of the Bones, Ligaments, and Tendons; in this the course and insertion of the back Sinew, or Flexor Tendon, may be seen, as well as the Lateral Cartilages. The Flexor Tendon is inclosed in a sheath, which is laid open in one part in order to shew the Tendon; it has been removed also from the bottom of the Tendon, that its insertion may be clearly seen.

In Plate 11th are represented the Ligaments, for which purpose the Tendons were removed.

The Lateral Cartilages may be seen in this view also.

In Plate 12th is a front and back view of the Bones. It will be unnecessary to give a particular description of these, as their form and relative situations may be seen by referring to the Plate. It may be useful, however, to point out the Sesamoid Bones, and the Navicula or Nut Bone: the former is connected posteriorly with the lower extremity of the Cannon or Shank Bone; they consist of two small Bones, firmly united by means of very strong Ligaments; they compose part of the Fetlock joint, having a moveable articulation with the Cannon Bone; their external part affords a smooth polished surface for the back Sinews to slide upon, and the same Ligament which composes this surface, comes round the back Sinews, so as to form a sheath for them, and keep them in their situation. In this sheath a fluid similar to synovia, or joint oil, is formed, for the purpose of rendering it smooth and slippery, and enabling the Tendon to move easily upon it. As these Bones project a little, they serve as a pulley for the Tendons to slide upon, and afford a considerable mechanical advantage to the Flexor Muscles of the limb. The Nut Bone serves as another pulley for the Tendon or back Sinew

to move upon: it is connected posteriorly with the Coffin Bone and the small Pastern, and affords the same kind of polished surface and sheath for the Tendon as we have before described.

CHAPTER VI.

On the Practice of Shoeing.

HAVING given a concise description of the Horse's Foot, and pointed out the uses of the various parts which compose it, I shall now describe the method of Shoeing; but first, it will be necessary to observe, that as the mode of Shoeing most commonly practised has so destructive a tendency, and produces such a variety of diseases, that we seldom meet with a Foot that has not lost, in a greater or less degree its orignal shape; it must be obvious therefore, that one kind of Shoe cannot with propriety be recommended for general application, and that it is necessary on all occasions to adapt it carefully to the state of the Foot. This constitutes the most difficult part of the art of Shoeing, and from neglecting this precaution, Shoes of the best form have often occasioned lameness.

In Fig. 1. Plate 1, is represented a Colt's Hoof in a state of nature, where no part has ever been cut away, and that has never been shod; this we have given as a standard of per-

fection, from which the goodness of Feet in general may be judged of, for surely no one will hesitate for a moment in admitting that the natural form is the best it can possibly possess.

In Fig. 2, of the same Plate, is shewn a perfect Foot prepared for the Shoe; in this it may be observed, that the superfluous horn has been cut away, and an even surface made for the Shoe to bear upon.

If we examine the Feet of a hundred Colts, it will be found that more than ninety of them are of the same form; it is true that some may have grown more luxuriantly than others, whereby the Crust will be deeper, and the bottom part may have been partially broken, so as to give the Foot a ragged and uneven appearance, still the essential shape is the same, and when this superfluous horn has been removed, it will be found that the bottom of the Foot will be nearly circular, the Sole concave, the Bars distinct, the Frog and Heels open and expanded.

In preparing a Horse's Foot for the Shoe, the lower part is to be reduced, when luxuriant, which is generally the case, more particularly at the Toe, and this is to be done by means of a buttress or rasp: the loose scaly parts of the Sole are likewise to be removed, so as to pre-

serve its concavity, and a small cavity is to be made with a drawing knife, between the Bar and Crust, to prevent the Shoe from pressing on that part, and occasioning corns: it is however necessary in doing this, to take particular care that the connection between the Bar and Crust is not destroyed or weakened, which would of course render the Bar useless.

The junction of the Bar and Crust affords a firm bearing for the Heel of the Shoe, and is to be rasped perfectly flat, and so low as to be exactly on a level with the Frog, that they may bear equally on a plane surface, before the Shoe is applied; indeed, the whole of the bottom of the Crust is to be made perfectly flat and even at the same time with the rasp, that the Shoe may bear equally on every part of it: Farriers should never be allowed to do this by means of a hot Shoe, which is too frequently the case. If any ragged parts are observed in the Frog, they are to be carefully removed with a knife, for, if suffered to remain, they might afford a lodgement for dirt and gravel. Thus do we prepare a Foot for the Shoe, and to a Foot of this description, I mean one that is sound and perfect, or that has not suffered any material alteration in its form from improper shoeing, the Shoe (Fig. 3, Plate 5.) is to be applied.

The Toe of the Shoe, for a middle sized Horse, is about an inch in width, and half an inch in depth or thickness; the Heels about half an inch in width, and three eighths in depth; the wearing part of the Toe is to be made of steel, and it may be observed, that the nails are brought very near to the Toe, but not quite round it; for when that is done, there must also be a groove made, which considerably weakens that part, and almost all Horses wear principally at the Toe. Both surfaces of the Shoe are perfectly flat, and the Heel of the Shoe rests upon the junction of the Bar and Crust, beyond which it should never extend.

It will be supposed, perhaps, that a Shoe which is flat on that surface next the Foot, will be apt to produce lameness by pressing on the Sole; but let it be recollected, that this Shoe is recommended only for a sound Foot, in which the Sole is always a little concave, so that it cannot possibly receive any pressure from a flat Shoe: it may be said also, that when the nails are placed so far from the Heels the Shoe will not be sufficiently secure, and will be frequently loosened; but as the Shoe bears equally on every part of the Crust, this objection cannot have any weight; it must be granted, however, that when a Foot is pared in the common way, that

is, when the Heels have been opened, and the Shoe so applied, that nearly an inch of the Heel has no bearing upon the Crust; that if the nails were placed so far from the Heels, as I have recommended, the Shoe would be very insecure, for as much of it as had no bearing upon the Crust, would operate occasionally as a lever in raising the nails, and consequently the Shoe would frequently be loosened. Farriers therefore find it necessary, when the Foot has been thus pared, and the Shoe applied in this way, to place the nails in the quarters, by which the Shoe is certainly rendered more secure than it would be had they been placed nearer the Toe.

Many disadvantages, however, attend this method. In the first place, by placing the nails in the quarters, they prove a considerable obstacle to the expansion of the Heels, and as the Crust is generally much thinner at the Quarters than at the Toe, the sensible parts are more liable to be wounded; but this does not apply to the hind feet, in which the Crust of the Quarters is generally thicker than that of the Toe. When a Horse over-reaches, if any part of the Shoe has no bearing upon the Crust, it is very liable to be struck by the Toe of the hind Foot, and Shoes are often forced off in this way; to this

may be added, the insecurity of such a Shoe when a Horse is rode on deep or heavy ground.

It will probably be observed of the Shoe which I have recommended, that it is inconsistent with the principle which has been laid down respecting the necessity of the Frog's receiving pressure. I believe it is an incontrovertible fact, that unless the Frog receives a certain degree of pressure, it will become soft and incapable of affording sufficient protection to the sensible Frog which it covers; that the Heels will gradually contract, and the natural form of the Foot will be destroyed, for I have proved by experiment, that the Bars alone are not sufficient to *prevent* contraction, though they certainly oppose it with considerable force; but it does not follow from this, that it is necessary for the pressure to be *constant*, nor do I believe that a Shoe which allows the Frog to bear upon the ground, when he stands upon a plane hard surface, can be always applied, even to *sound* feet, without inconvenience; there is no doubt that a Horse in a state of nature has his Frog almost always in contact with the ground, and then of course he feels no inconvenience from it; but when burthens are placed upon his back, and he is driven about upon hard roads, he is certainly in

very different circumstances, and if the Frog in such cases were constantly exposed to this severe pressure, it would sometimes, I believe, occasion lameness.

In the Foot, prepared for the Shoe, (Fig. 2, Plate 1.) the Frog and Heels are on a level, and if placed on a plane hard surface, would bear equally; by applying the Shoe, (Fig. 3, Plate 5.) the Frog would be raised three-eights of an inch from the ground; that when the Horse is going upon a hard surface, where he would be most liable to feel inconvenience from the pressure on the Frog, it receives none; but upon soft yielding ground the Frog certainly receives pressure, and without giving the animal any pain. To a Horse that travels or works regularly, and is occasionally taken upon soft ground, I believe that the pressure the Frog receives in this way, is quite sufficient to preserve the Foot in a state of health; but when a Horse is kept almost constantly in the stable, standing upon hot litter, particularly in hot and dry weather, his feet will certainly be undergoing an alteration in their form, and will be in a progressive state towards disease.

In those cases, however, contraction of the Hoof may be effectually prevented by means of the Patent Artificial Frog, invented by Mr.

Coleman.* By this ingenious contrivance a Horse's Frog may receive sufficient pressure, in whatever circumstances he may be placed to prevent contraction, and keep the Foot sound and healthy, without the inconvenience of wearing thin heeled Shoes; but it must be remembered that whenever the Frog is much exposed to pressure, whether it be by applying the Patent Frog, or by the thin heeled Shoe, and reducing the Crust at the Heels, it is necessary that the Quarters and Heels should possess a proper degree of pliancy; if they are rigid and inflexible, it is evident that the sensible Frog and Cartilages would be placed between two fixed points, and they would consequently be bruised and inflamed. I have indeed seen several cases of lameness produced in this way; whenever the Hoof therefore appears to be too dry and strong, or to have lost its natural elasticity, it is necessary to rasp the Quarters and to keep the whole Hoof moist, either by applying several folds of flannel round the Coronet, constantly wetted, or by making the Horse stand in soft clay four or five hours during the day; by these means the natural flexibility of the horn would be restored, and the Heels and Quarters would yield in a small degree, whenever the Horse's weight was thrown upon the Frog.

* Professor of the Veterinary College.

Having said as much as appears to be requisite of the method of shoeing a sound Foot, I shall proceed to describe those diseases of the Foot which render a different kind of Shoe necessary. In the first place it will be proper to observe that when a Horse, even with a sound Foot, has worn Shoes that are very thick, or turned up at the Heels, particularly if at the same time the Crust at the Heels has been suffered to grow so high that the Frog is kept at a considerable distance from the ground, it would be very improper to reduce the Heels suddenly, so as to allow the Frog to receive pressure; the back Sinews would in that case be injured, and lameness might ensue. In Feet of this description it is necessary to remove from the Toe all that can be done without exposing the part too much, and to lower the Heels gradually; the Toe of the Shoe should be made rather thin, and of the best steel.

The Shoes for Draught Horses should be made flat on both surfaces, provided the Sole is of a proper form and thickness, but if flat or convex, and consequently too thin, which is often the case in Horses of this description, the internal surface of the Shoe must be concave; still the external surface should be flat, for the convex Shoe, which is commonly used for Draught

Horses, prevents them from treading securely, and renders them incapable of exerting the whole of their strength.

CHAPTER VII.

Diseases of the Foot.

THE most frequent cause of lameness in the Foot is a contraction of the horney matter that composes the Hoof which is generally accompanied with an increased concavity and thickness of the Sole. The cavity of the Hoof being thus diminished, the sensible Foot suffers a greater or less degree of compression, which occasions in it inflammation and lameness. When we examine the bottom of a contracted Foot, instead of being circular, it will be found of an oblong form, the Heels and Frog will appear as if they had been squeezed together in a vice. Sometimes the Frog has become rotten, and discharges an offensive matter.

The sensible Foot may also be compressed and inflamed by an increased thickness, and a consequent loss of elasticity in the Hoof and Sole, and in this case there is seldom any considerable alteration observed in the external form of the Foot.

We sometimes meet with Horses that go perfectly sound, though their Hoofs are much contracted; on the other hand we often see severe lameness produced by a slight degree of contraction. In attempting to cure this disease, the first step to be taken is to remove carefully with a knife all the rotten parts of the Frog, and apply Tar to those which are sound: a small quantity should also be poured into the cleft of the Frog; this will promote the secretion of horney matter, and if assisted by pressure, will increase the solidity of that which is already formed. The Quarters and Heels are then to be rasped, particularly at the Coronet, and the superfluous parts of the Sole removed with a butteris and drawing knife. The Toe is to be shortened as much as can be conveniently done, and if the Heels are too high, that is, if the Crust at the Heels is too deep, it will be necessary to reduce it with the butteris and rasp. It frequently happens, however, in Feet of this description, that the Heels are too low, in such cases they must be carefully preserved, and when a Shoe is applied, it should be made thicker at the Heel than at the Toe, and somewhat longer than that recommended for a sound Foot.

When the contracted Hoof has been thus treated, the next thing to be done is to keep the

Foot as moist as possible, and expose the Frog constantly to pressure, either by means of the artificial Frog, or by reducing the Crust at the Heels. When these remedies have been persevered in for a short time, the Frog will have acquired a certain degree of hardness and solidity; it will then be proper to turn the Horse out into some soft meadow ground, without Shoes, taking care that the bottom of the Foot is occasionally reduced, so that the Frog may constantly receive pressure. If the Foot is examined after a short time, it will be found that all the new formed Hoof at the Quarters and Heels, that is all the horn that has been produced at those parts since the remedies were first employed, instead of growing down nearly in a perpendicular direction, or obliquely inward, is forced outward in its descent, so that the cavity of the Hoof will be considerably enlarged, and the compression of the internal parts removed. When the Horse has been at grass a sufficient time for the new Hoof to grow completely down, the shape of the Foot will be found much altered; the Heels, instead of being narrow, will be open and expanded, the Frog will be considerably widened, and not squeezed together as before, and the oblong form will be changed to one that is more circular, in

short, when the Frog during this time has been properly exposed to pressure, and the Quarters so rasped as to be rendered sufficiently flexible, the Hoof will be found very similar in its form to that of a Colt.

In cases where a contraction of the Hoof has already produced inflammation and lameness, particularly if the lameness is not recent, it will be adviseable to blister the Pasterns previous to turning the Horse out, and when the inflammation is very considerable, a Laxative Ball, with a cooling diet, will be serviceable. The cruel operation of drawing or tearing off the Sole has been recommended as a remedy for contracted Feet, but very little reflection will convince any one of its inefficacy; whenever it has been supposed to do good, the benefit has probably arisen from the long run at grass that becomes necessary after it, and then the advantage might have been equal, perhaps greater, had the operation been omitted. It has been observed before, that in contracted Hoofs there is generally an increased concavity in the Sole, whence we may reasonably conclude that it opposes the contracting powers, though in the end it is not capable of preventing the contraction from taking place. Upon a Horse that has been lame from this disease a considerable time,

it is difficult, if not impossible, to perform a radical cure; in such cases I have several times succeeded in removing the lameness, but the internal parts had become so irritable, or their organization had been so altered, that very moderate work would cause the lameness to return. When the lameness is not so considerable as to render the Horse totally unfit for work, it will be adviseable to apply a Shoe that is thicker, wider, and longer at the Heels than that recommended for a sound Foot, and if the Frog is tender and rotten, the Bar-Shoe will be found serviceable (Plate 5, Fig. 2). It will be useful also to keep the Hoof as moist as possible, by making the Horse stand in wet clay four or five hours during the day.

In examining the Feet of Horses after death, that have been thus diseased, we find generally that the Laminæ have been destroyed, the Coffin-bone injured, the Lateral Cartilages ossified; in some cases, however, no appearance of disease can be perceived on the internal parts of the Foot. When the disease has gone so far as to injure the Laminæ, Cartilages, or Coffin-bone, there is not a possibility of removing it, which shews how necessary it is to attend to the Feet of Horses more than is commonly done; and

that whenever any alteration is perceived to be going on in the shape of the Foot, when the Heels appear to be getting narrower, the Frog squeezed together and discharging matter, in consequence of the compression which the sensible Frog suffers; it surely must be of importance to adopt such measures as will not only prevent the disease from going any further, but will also restore the Foot to its natural healthy state; for when it has gone so far as to produce absolute lameness, the cure is by no means certain. How frequently do we meet with Horses that are said to be tender in the Feet, and how subject are they to fall in consequence of this tenderness, which generally arises from contraction of the Crust; in this case the sensible Frog is extremely irritable and inflamed, and the horney Frog which nature designed for its protection being soft or rotten, and inadequate to its function, every blow that it receives must of course give the animal very considerable pain, and I have known many valuable Horses thrown down in this way; since however high and wide the heel of the Shoe may be, the Frog will be subject to occasional blows from sharp projecting stones. Whenever therefore any of those symptoms make their appearance, and whenever the

Foot seems to be undergoing an alteration in form, immediate recourse should be had to the mode of prevention we have pointed out.

The next disease to be noticed is the flat and convex Sole, or, as it is more commonly termed, the Pummice Foot, which is represented in Plate 4th, Fig. 2 and 3. This disease most commonly occurs in heavy Draft Horses, and seems to arise from a weakness of the Crust; for when the Sole becomes flat or convex, the Crust also loses it proper form and becomes flatter, appearing as if it had been incapable of supporting the animal's weight, and had therefore given way, allowing the internal Foot to press so upon the Sole as to give it the appearance we observe. This explanation of the disease will perhaps appear the more probable, if we consider that when a Horse is drawing a heavy load, not only his own weight, but great part of that which he is drawing also, is thrown ultimately upon his Feet, and as the fore Feet support by far the greatest share, it is not at all astonishing that the Crust should sometimes give way; for thought it possesses sufficient strength for the purposes of the animal in a state of nature, yet that strength is limited, and not always adequate to the heavy burthens which the Crust has to sustain. When the Sole becomes flat or con-

vex, it is rendered also thinner than it is naturally, and sometimes so much so as to yield easily to the pressure of the finger; the Sole in this state is of course incapable of affording sufficient protection to the sensible Sole, which is then closely in contact with it; and if it be exposed to pressure, lameness must be the consequence. It is almost superfluous to observe, that the flat Shoe would be ill adapted to a Foot of this description; it becomes necessary in this case to apply one that is concave on its internal surface, that the Sole may not receive any pressure from it, and of sufficient width to protect the Sole as much as can be done from the pressure of the ground. In Plate 5th, Fig. 1, this Shoe is represented, in which it may be observed that although the internal surface is concave, still there is a flat surface for the Crust to bear upon. In attempting to cure this disease, it is first necessary to take off the Horse's Shoes, and to make him stand on a flat hard surface; this kind of pressure will harden the Soles, and in the end render them thicker, particularly if tar be frequently applied to them. I cannot say that I have ever seen the disease radically cured by this treatment, but I have known considerable advantage derived from it, especially in one case, where the Soles, from being convex and

very thin, became flat and sufficiently firm to bear moderate pressure without inconvenience to the Horse.

We sometimes meet with Horses, particularly among those that are well bred for the turf, whose Pasterns are remarkably long and oblique in their position, while the Heels are very low, and the Toe of considerable length; if thin heeled Shoes were applied to feet of this description, or if the Toes were not kept short, the Horse would be very liable to lameness, from the extraordinary pressure to which the Ligaments and back Sinews would be exposed; the Heels therefore of such Horses are to be carefully preserved, and the Toes kept as short as possible. The Shoes which are applied should be made sufficiently thick and long at the Heel to make up for the deficiency of horn in that part, in order to relieve the Ligaments and back Sinews, and with the same view the Toe should be made rather thin, and of the best steel. There is another kind of deformity sometimes observed in the Foot, that is, the Hoof loses that oblique form represented in Plate 4, Fig. 1, and approaches towards the perpendicular, at the same time the Heels become very high; in this case it is necessary to reduce the Crust at the Heels, and apply the thin heeled Shoe.

SAND CRACKS

Are longitudinal fissures in the Hoof, generally near the Heels, beginning at the Coronet. Horses, whose Hoofs have become dry and brittle are most subject to them, and they generally occur in the hot and dry months of summer, and seem to be occasioned by a strong disposition in the Hoof to contract, at a time when it is dry and inflexible; they do not always cause lameness, and are sometimes very easily cured; but when the fissure is so deep as to reach the sensible parts, it often produces very severe lameness, and requires a considerable time to be completely removed. Having rasped the Quarter, let the Crack be opened with a drawing knife, so that the actual cautery, or red hot iron may be applied to it; this will cause a matter somewhat resembling glue to exude, which will tend to fill up the fissure, and protect the sensible parts that would otherwise be exposed. Our next object is to remove the contractile disposition of the Hoof, without doing which every other remedy would avail little; this is to be effected by keeping the Hoof constantly moist, either by means of clay, or by turning the Horse out to grass in soft moist ground,

but previous to this it is necessary to rasp the bottom of that Quarter which is cracked, so that no part of it may bear upon the Shoe.

CORNS.

Corns are generally the consequence of bad shoeing, or improper management of the Foot, and may therefore be avoided by following the directions I have given under that head; but when they do occur, it is necessary to remove the red part or Corn, with a drawing knife, and to apply the Shoe so that the tender part may not receive any pressure: when it has been neglected, we sometimes find matter formed in this part which often breaks out at the Coronet, in this case it is necessary to make an opening for the matter in the angle between the Bar and Crust. (See Fig. 2, Plate 1, Letter *e*.)

The sore is to be dressed with compound Tincture of Benzoin, and the cavity to be loosely filled with Digestive Ointment, which is to be kept in by means of a bar Shoe.

QUITTOR.

This disease generally arises from a wound or bruise in the Coronet, and if neglected, penetrates under the Hoof, forming sinuses in various directions. The most effectual method of treating those complaints is to ascertain, in the first place, the direction and extent of the sinuses, and then to force into them with a strong probe some chrystalized Verdigris, rolled up in thin blotting or silver paper. This, though apparently a severe remedy, will be found very effectual. Sublimate and Arsenic have been strongly recommended as remedies for the Quittor, indeed it is probable that any caustic application would effect a cure; but I have succeeded so well with the chrystalized Verdigris, that I have not been induced to try those medicines. When a Corn has been neglected and suffered to break out at the Coronet, or when the Foot has been wounded or pricked, as it is termed, by the Farrier in shoeing, and this is not discovered until matter appears at the Coronet; though these may be considered as cases of Quittor, a different treatment is required from that we have just described; in those cases the cure greatly depends on making an opening for the matter in the bottom of the Foot, where the

nail which inflicted the injury entered; or if produced by a Corn, the opening must be made in the angle between the Bar and Crust. (Letter *e*, Fig. 2, Plate 1.) The best dressing on those occasions is the compound Tincture of Benzoin and Digestive Ointment; a Poultice is sometimes required to soften the horney matter, and subdue any inflammation that may exist in the Foot.

THRUSH.

This disease consists in a discharge of fœtid matter from the cleft of the Frog, which part is generally rotten and so soft as to be incapable of affording sufficient protection to the sensible Frog which it covers; hence arises that tenderness of the Foot which is so often observed. When this complaint attacks the fore feet, it is seldom, if ever, an *original* disease, but merely a *symptom* or *effect*. The cause is generally a contraction of the horney matter at the Quarters and Heels, by which the sensible Frog is compressed and inflamed; the discharge which takes place is a consequence of this inflammation, and may be considered as an ineffectual effort of nature to cure it; the discharge, however, certainly diminishes the inflammation,

and prevents it from coming so considerable as it otherwise would, for it often happens when it has been stopped by the injudicious application of Astringents, or when it ceases spontaneously, that the inflammation becomes violent, extends to the other parts of the Foot, and occasions severe lameness, which generally is relieved or removed by a return of the discharge; but we are not to infer from this that an attempt to cure Thrushes is improper, it only shews that it is necessary in the first place to remove the *cause* of the disease; with this view the Quarters are to be rasped, and the Hoofs kept constantly moist by making the Horse stand in clay for some part of the day, taking care to keep the Frog dry by means of tar. When by these means we have succeeded in removing in some measure the compression and consequent inflammation of the sensible Frog, it will be adviseable to apply some Astringent to the Frog, which, if assisted by pressure and tar, will render that part firm and solid, and the discharge will of course cease when the inflammation leaves the sensible Frog.

The best Astringents for this purpose are a solution of White or Blue Vitriol, Alum, &c. There are some cases, however, of Thrushes which though occasioned by compression of the

sensible Frog, it is difficult, if not impossible, to eradicate. I have examined Feet with this disease after death, and have found the concave part or cleft of the *sensible* Frog in a state of ulceration, which of course rendered it incapable of secreting horney matter, and proved a constant source of Thrushes.

With respect to those Thrushes which attack the hind Feet, and which sometimes, though rarely, happen also in the fore Feet, independently of the above cause, a different treatment is required. When the discharge has existed for a considerable time, by stopping it hastily we frequently produce inflammation and swelling of the legs; still it is necessary to check the disease, since, if neglected, it sometimes degenerates into that dangerous disease termed Canker. It is adviseable, therefore, in such cases, to keep the Bowels open by the following Laxative Ball, given every morning until the desired effect is produced, and repeated occasionally. —The best application for the Frog is tar, and one of the above Astringents; other remedies, however, have been strongly recommended, among which are Powdered Lime, Egyptiacum, Tincture of Myrrh, &c. and other Astringents. This treatment will be greatly assisted by two or three hours exercise

every day, and frequent hand-rubbing to the Legs.

LAXATIVE BALL.

Take Aloes, - - 2 dr.
Castile Soap, - - 3 dr.
To be made into a Ball for one dose.

CANKER.

This disease frequently originates in a Thrush, and most commonly attacks the hind feet; it generally proves difficult to cure, and not unfrequently incurable. The Frog is the part first attacked, which becomes soft and rotten, discharging matter of a peculiar offensive smell; the horney Frog is at length totally destroyed, and the sensible Frog, instead of secreting horn, forms a substance somewhat resembling shreds of leather. The disease soon extends to the Sole and other parts of the Foot, even to the Coffin Bone, and is then, I believe, incurable. The first thing to be done is to cut away freely all the diseased parts, and when the bleeding is stopped, let the following Liniment be applied, and repeated every morning; the dressings may be kept on by means of a bar Shoe. Pressure on the diseased part will very materially assist

in effecting a cure: whenever the Foot is dressed, such diseased parts as may again make their appearance are to be carefully removed, and to such as do not appear to be sufficiently affected by the Liniment, let a little Sulphuric or Nitrous Acid be applied. When the parts which were diseased begin to look red and healthy, and the discharge loses that peculiar smell before noticed, becoming whiter and of a thicker consistence, there is great probability of a perfect cure being effected; and when these favourable appearances take place, some mild application will be proper, except to such parts as do not appear to have entirely lost their foul appearance.

STRONG LINIMENT.

No. 1.

Oil of Turpentine, -	1 oz.
Sulphuric Acid, - -	½ oz.

Mix very cautiously.

Tar, - - -	4 oz.

Mix.

No. 2.

Red Nitrated Quicksilver,	1 oz.
Nitrous Acid, - -	2 oz.

The former being dissolved in the latter, mix them cautiously with 4 oz. Tar.

MILD LINIMENT.

Chrystalized Verdigris, finely powdered, 1 oz.
Honey, - - - - 2 oz.
Powdered Bole and Alum, of each, ½ oz.

Vinegar enough to give it the consistence of a Liniment, to be mixed over a gentle fire.

CUTTING.

A Horse is said to *cut* when he wounds the inside of the Fetlock joint with his Foot in travelling. This may arise from various causes, the most common of which seems to be an improper position of the Foot; the Toe, instead of being in a line with the point of the Shoulder, inclining either inward or outward; in the latter case we generally find that the inner quarter of the Hoof is lower than the other, and that the faulty position of the Foot depends upon this inequality of the Quarters; it must be obvious, therefore, that the remedy in this case consists in lowering the outer Quarter, and making the inner branch of the Shoe thicker than the other. When the Toe inclines inward, it renders a Horse liable to cut on the inside of the Knee, at the lower part of the joint; this is

termed the speedy cut, from its happening upon the trot or gallop, and is considered as a dangerous failing in a Horse, the violence of the pain which the blow occasions sometimes causing him to fall very suddenly. The remedy for this is to keep the Toe as short as possible, that being the part which generally inflicts the wound and to alter the improper position of the Foot. Cutting frequently depends upon weakness or fatigue, and is therefore very liable to happen to young Horses when rode hard over deep heavy ground. The only remedy in this case is to avoid the cause until the Legs acquire more strength, or to protect the wounded part with leather, or a boot, as it is termed. Whenever a Horse cuts, it is adviseable to ascertain what part it is that inflicts the wound, and this may often be done by applying Tar to the wounded part; this will of course adhere to that part of the Hoof or Shoe which comes into contact with the wound. Should it be the edge of the Shoe, which I believe is seldom the case, the cause may be easily removed by the Farrier; whatever part of the Hoof it may be, it should be rasped away as much as can be done with safety, and particular attention paid to the position of the other Foot, which if improper, should be improved as much as it can be by shoeing.

BLEEDING.

This operation is frequently necessary in the diseases of Horses, and is performed either with a lancet or fleme, in the Neck Vein.

The Blood should always be preserved that the *quantity* drawn may be accurately known, and that its *quality* may be ascertained. If, after it has coagulated, a white, or rather a light buff coloured jelly, is found on the surface, an inflammatory state of the body is indicated; but in order to render this criterion useful, the Blood must not be taken from too small an orifice, nor should it be suffered to run down the sides of the vessel which receives it.

Blood drawn from a healthy Horse very soon coagulates, and appears like an uniformly red jelly with a small quantity of fluid, resembling water, floating on its surface; this red jelly may by washing be rendered of a light buff colour, and exactly resembles the buff or size, as it is termed, of inflamed Blood. The most healthy Blood, therefore, contains this size, and the cause of its not being conspicuous in such Blood, is that coagulation takes place before the red colouring matter can have time to separate from it; but as Blood that is drawn

from an animal labouring under general *inflammation* or fever always preserves its fluidity much longer than healthy blood, and as the red colouring particles are specifically heavier than the fluid with which they are mixed, they will of course be gradually subsiding as long as the mass continues fluid, leaving a coat of buff coloured jelly on the surface.

It has been observed before that healthy Blood, when suffered to coagulale, appears to consist of two parts, the red jelly, termed *Crassamentum*, and the water, or *Serum*; and that the former may afterwards be separated by washing into two parts, viz. the red colouring particles, or *red Globules*, as they are termed by anatomists, and buff coloured jelly, or *coagulable Lymph*. The proportion which these component parts of the Blood bear to each other, seems to depend upon the state of the system at the time it is drawn. When the Body is healthy and vigorous, we find but little Serum; when it is preternaturally excited, or in a state of inflammation, there is still less, and when the animal is weak and debilitated, there is generally an abundance of Serum. Another circumstance to be attended to in examining Blood is the firmness or tenacity of the coagulum.—In health the Blood when drawn and suffered to

coagulate, is of a moderately firm consistence, and easily broken, but when the system is highly excited, as in general inflammation, so great is the tenacity of the mass, that the finger can scarcely penetrate it; on the other hand, when the powers of life are weak, as in the latter stage of symptomatic fever, the Blood almost loses its power of coagulating. I recollect a Glandered Horse that was made the subject of experiments, and that died in consequence of large and repeated doses of Mercury; the debility this produced was excessive, and the Blood appeared as thin, and nearly of the same colour as claret. The necessity, therefore, of examining Blood that is drawn from a diseased Horse must be obvious, as it assists in forming a judgment of the nature of the disease, and points out the proper remedies. When Blood exhibits buff on its surface, particularly if at the same time the coagulum is firm and solid, we may be certain that the complaint is inflammatory, and that bleeding may be repeated with advantage. If on the other hand the mass of Blood is wanting in tenacity, and has more Serum than usual, we may safely conclude that the system is in a state of debility, and consequently that bleeding is highly improper.

In cases of symptomatic Fever it will generally be necessary to take away four or five quarts of Blood at the first bleeding; I have seen even six quarts taken with manifest advantage. It is at this period of the disease (its commencement) that copious bleeding is particularly useful, and it is from an absurd prejudice that obtains against this practice, that so many Horses are destroyed by such Fevers. It is truly laughable to hear a Groom or Farrier pronouncing, with an affectation of unerring sagacity upon the qualities of Blood, frequently observing that it is too hot, and that consequently the Horse must have a Fever; or that it is too dark coloured, and therefore foul, or that it is too thick, and consequently unfit for circulation; it is said to be full of humours. With respect to the *heat* of the Blood it will be sufficient to observe that it preserves nearly the same temperature while circulating in the body, whether the animal be an inhabitant of the most sultry or of the coldest country, whether in health or in the highest Fever.

As to the colour of the Blood while flowing from the Body, it may be either red or of a dark colour, as the operator pleases, for pressing on the Vein for a short time before the orifice is made, it may always be made to appear of a

dark colour. The opinion that Blood sometimes becomes thick or viscid in the Body, was supported by many respectable philosophers, but is now universally abandoned, because it has been *proved* to be erroneous.

I think it a bad practice to bleed Horses frequently when there is no urgent occasion, as they thereby acquire a plethoric habit, and unless the operation be regularly performed and gradually increased in frequency, troublesome diseases might ensue. Horses of a full habit, that are consequently liable to inflammatory complaints, will receive most benefit from moderate, but long continued exercise, and good grooming. When bleeding is performed for the cure of important inflammatory diseases, a large orifice should be made in the Vein, and the Blood drawn in a large stream, as we thereby diminish the action of the Heart and Arteries much more readily than if it were drawn slowly from a small orifice. In cases of external and circumscribed inflammation, topical bleeding is eminently useful, which is done by opening some Veins contiguous to the affected part, or by scarifying the inflamed surface.

PHYSIC.

In purging Horses great care and attention are necessary, their Bowels being particularly irritable, and liable to inflammation. The Physic commonly given is certainly too strong, and I am convinced that many Horses have been destroyed by the immoderate doses that have been recommended by writers on Farriery; when this happens, the mischief is generally attributed to the coarseness or impurity of the medicine, and the Druggist is undeservedly censured. A modern author has ingeniously availed himself of this prejudice, to explain the violent effects which his Cathartic prescriptions have sometimes produced. I must presume, however, to suggest that these effects were more probably occasioned by the *excessive quantity* than by the impurity of the purgative ingredients.

It is adviseable to prepare a Horse for Physic by giving him bran mashes for a day or two; this will gently relax the Bowels, and remove any indurated fœces that may be lodged in them, it will also tend to facilitate the operation of the medicine.

When a Horse is purged for the first time, it is prudent to give a very moderate dose; were the common quantity given to one of weak,

irritable Bowels, there would be danger, not only of producing great debility, and thereby of counteracting the intention of the medicine, but likewise of destroying the animal, by bringing on an inflammation of the Bowels; and this is by no means an unfrequent occurrence.—Should the first Ball not operate sufficiently, a stronger may be given after an interval of a few days.

The morning is the best time for giving a Purgative, the Horse having previously fasted two or three hours. If he is disposed to drink after taking the Ball, give a moderate quantity of warm water, which will promote its solution in the Stomach, and consequently expedite the operation: during this day the Horse is to be kept in the stable, and fed with bran mashes and a moderate quantity of hay; he may be allowed also to drink plentifully of warm water, and if he refuses it in this state, let it be offered nearly cold. The following morning he is to be exercised, and at this time the medicine will generally begin to operate. Should the purging appear to be sufficient, he need not be taken out a second time, but when the desired effect does not readily take place, trotting exercise will tend to promote it; during this day also he is to be carefully supplied with bran mashes and

warm water: warm cloathing, more particularly when out of the stable, must not be omitted; the next day the purging will generally have ceased, and then a small quantity of corn may be allowed When Physic does not operate at the usual time, the Horse appearing sick and griped, relief may generally be obtained by giving a Glyster of water gruel, and making him drink freely of warm water, assisted by exercise. When the purging continues longer than usual, and the Horse appears to be considerably weakened by the evacuation, let the Astringent Ball be given.

It will be observed, perhaps, that some ingredients, commonly thought necessary in Physic, have been omitted in the following formulæ.—These medicines have been proved, however, to be perfectly useless. Jalap, though given to the amount of four ounces, will produce very little purgative effect upon a Horse, nor will Salts or Cream of Tartar; Rhubarb, however large the dose, will not operate as a purgative, though it may be useful in moderate doses as a stomachic.

PHYSIC.

No. 1.

Succotrine Aloes, -	5 dr.
Prepared Natron, - -	2 dr.
Aromatic Powder, -	1 dr.
Oil of Caraways, - -	10 drops.

Syrup enough to form the Ball, one dose.

No. 2.

Succotrine Aloes, -	7 dr.
Castile Soap, - -	½ oz.
Powdered Ginger, -	1 dr.
Oil of Caraways, - -	10 drops.

Syrup enough to form the Ball, one dose.

No. 3.

Succotrine Aloes, -	1 oz.
Prepared Natron, - -	2 dr.
Aromatic Powder, -	1 dr.
Oil of Anise-seeds, -	10 drops.

Syrup enough to form the Ball for one dose.

The Ball, No. 2, I have generally found sufficient for strong Horses, and have scarcely ever had occasion to go farther than No. 3.—Should any one, however, be desirous of stronger medicine, it may readily be procured by adding one or two drams of Aloes, or one dram of

Calomel to the Ball No. 3; but I must not omit to observe, that there appears to me to be a considerable danger in making the addition.

DIURETICS.

These are medicines which by stimulating the Kidneys, increase the secretion of Urine. The following formulæ I have found both convenient and efficacious.

No. 1.

Castile Soap,	- -	4 oz.
Powdered Rosin and Nitre, of each,		2 oz.
Oil of Juniper,	- -	½ oz.

Linseed Powder and Syrup enough to give it a proper consistence, to be divided into six Balls for strong, or eight for weak delicate Horses.

No. 2.

Castile Soap,	- - -	4 oz.
Venice Turpentine,	- -	2 oz.

Powdered Anise-seeds enough to give it a proper consistence, to be divided into six Balls.

FOMENTATIONS.

Fomentations are commonly made by boiling Wormwood, Southernwood, Camomile Flowers, and Bay leaves in water, so as to make a strong decoction, which being strained off, is to be applied as hot as it can be, without giving pain to the animal, by means of large flannel cloths. The efficacy of Fomentations depends in great measure on their use being continued for a considerable time together, and being frequently repeated.

POULTICE.

The following mixture will be found useful as a common Poultice: fine Bran 1 quart; pour on it a sufficient quantity of boiling water, to make a thin paste, to this add of Linseed Powder enough to give it proper consistence.

ROWELS.

When these are used with a view of relieving internal inflammation or fever, it will be found useful to apply blistering ointment instead of

Turpentine, or the digestive commonly made use of, for this will produce a considerable degree of inflammation in a short time.

PULSE.

In the management of sick Horses great advantage may be derived from attending to the state of the pulse, as we are thereby enabled to judge of the degree or violence of the disease, and the probability there may be of recovery: we are in some measure assisted also by it, in ascertaining the nature of the complaint, and in the application of remedies.

In a healthy Horse the Pulsations are about 36 or 40 in a minute, and may be felt very distinctly either on the left side, or in an Artery which passes over the lower Jaw Bone; in short a Pulsation may be felt in every superficial Artery. When the Brain is oppressed, the Pulse generally becomes unusually slow: in a case of water in the Brain, which occurred lately, the Pulse fell to 23 in a minute; in the progress of disease, however, it became unusually quick.

When a Horse appears rather dull, and does not feed properly, it is adviseable to examine the Pulse, and if it is found to exceed the

standard of health, immediate recourse should be had to bleeding; by this timely interference many dangerous complaints may be prevented. When the Pulse rises to 80 or 90 in a minute, there is reason to be apprehensive of danger, and when it exceeds 100, the disease frequently terminates in death.

GLYSERS.

A variety of compositions have been recommended for Glysters by those who have written on the subject, there being scarcely an article in the Materia Medica that has not been occasionally employed in this way. I have found, however, from considerable experience, that for a common Glyster, water-gruel is as efficacious as the most elaborate composition; when that cannot be readily procured, I have been in the habit of using warm water, and without perceiving any difference in the effect. Where a purgative Glyster is required, from four to eight ounces of common Salt may be added; and if an anodyne be wanted, or an astringent, let half an ounce of Opium be dissolved in a quart of water-gruel. The best method of administering Glysters, is by means of a bladder

and pewter pipe. If a Glyster is employed for the purpose of emptying the large intestines, or of purging, the quantity of liquid should not be less than a gallon or six quarts; but when it is used as an anodyne or astringent, from a quart to three pints of the liquid will be sufficient.

ON THE MANAGEMENT OF A HORSE DURING A JOURNEY.

Previous to setting out on a journey, every precaution should be employed to bring a Horse into as perfect a state of health as possible, as we thereby avoid much trouble and inconvenience; should he be at all subject to grease or swelling of the legs, a dose of physic is to be recommended, taking care to preserve the Heels clean, and to keep up a brisk circulation in the legs by frequent hand rubbing; should the feet of the Horse be tender, it is necessary to enquire into the cause of that tenderness; if it arises from Corns, let the directions be followed that are given under that head; if it proceeds from flat and thin Soles, apply Tar to them, and let the Horse stand upon a flat surface, without Shoes, by which means they will be rendered thicker

and more firm; and when he is rode let the concave shoe be made use of. When Thrushes or rottenness of the Frog are the cause of the tenderness, cut away the diseased parts, apply Tar with a pledget of Tow, and upon this place the *artificial* Frog—the *natural* Frog will in consequence soon become firm and solid, and the tenderness will be in great measure removed: if the Thrushes are occasioned by a contraction of the Heels, which is frequently the case, it will then be necessary to rasp the quarters moderately, and should they appear to be too strong, wanting a proper degree of elasticity, keep the Hoof constantly moist. Horses that travel during the winter are very liable to have their Heels inflamed and cracked, as it is termed, unless great attention is paid to them in the stable. In cases where the Heels are already thus affected, they should be washed with moderately warm water as soon as the Horse gets in, and afterwards carefully wiped dry with a soft cloth; if much inflamed the Astringent Lotion is to be applied, and if there be any ulcers or cracks, use the Astringent Ointment, and let the Alterative Powder, No. 2, be given occasionally. When a Horse's wind appears to be imperfect, he should not be allowed to fill himself with hay or water, and must be prevented from eating

his litter, which Horses of this description are generally inclined to do, particularly when stinted in hay; in this case costiveness sometimes occurs, which always increases the complaint; to remedy this, let a Glyster and a few bran mashes be given; too high feeding is also very prejudicial in those complaints, as any thing which tends to create a plethora, and determine too much Blood to the Lungs, is sure to aggravate the disease. To a Horse that purges or scours in travelling, and appears faint, sweating much with moderate exercise, give the Cordial Ball, the efficacy of which is sometimes increased by being mixed with a pint of ale or strong beer: if the complaint does not give way to this treatment, let the Astringent Ball be given.—As soon as a Horse comes into the stable, let his feet be well cleaned, and all dirt or gravel carefully removed. It is a very common practice with ostlers, even in winter, to tie the Horse up in the yard, that he may undergo the ceremony of having his Heels washed with cold water; this should never be permitted during the winter, as many bad consequences may arise from it. During hot weather, when the roads are dry and dusty, allow a Horse to drink a small quantity of water now and then, while on the road; this not only refreshes him considerably, but

has the useful effect of cooling and moistening his Hoofs, as he will generally be made to stand in the water while drinking, nor is there the least danger to be apprehended from it, unless he is rode very hard immediately before or after. In winter he should never be taken into the water if it can be avoided conveniently.

Should the Horse appear dull and lose his appetite, let him be bled moderately, and take a dose of nitre with a bran mash; this, with a little rest, will soon recover him. It is a common practice, when this happens, to give cordials, which are very improper, and often do much injury to the animal, by bringing on a fever. Some Horses are particularly subject to the Flatulent Cholic or Gripes; this is often the case with *crib-biters*; on such occasions it is adviseable to be always provided with a remedy, and as a Ball is the most convenient form, I have given a recipe for the purpose (see Flatulent Cholic or Gripes). A suppression of Urine or great difficulty and pain in staling, is an accident that sometimes occurs in travelling; and in such cases a Diuretic Ball is commonly given, which though sometimes successful, has often done mischief. The most effectual way of relieving the Horse, is by throwing up a Glyster, and bleeding moderately: should there be no appear-

ance of inflammation in the Kidneys, a dose of Nitre may also be given. The common practice of loading a Horse with clothes, and keeping him in a close warm stable, if he happens to take cold during a journey, is certainly improper, since he is liable to be frequently exposed to wet and cold in travelling; it is a well-known fact, that animals are not hurt by being kept in any uniform temperature, whether it be hot or cold; and that their diseases more commonly arise from sudden changes, or frequent variation of temperature.

When a Horse becomes suddenly lame in travelling, let the Feet be carefully examined. Should the lameness be occasioned by a wound from a nail or flint, apply Tincture of Myrrh or Fryar's Balsam, having previously removed all dirt or gravel from it; and if the wound has been inflicted with a nail, let it be carefully opened to the bottom with a small drawing knife, and proper means used to prevent dirt from getting to it.

CORDIAL BALLS.

No. 1.

Cummin-seeds,
Anise-seeds,
Caraway-seeds, of each, 4 oz.
Ginger, - - - 2 oz.

Treacle enough to make it of a proper consistence for Balls. The dose about 2 oz.

No. 2.

Anise-seeds,
Caraway-seeds,
Sweet Fennel-seeds, and
Liquorice Powder, of each, 4 oz.
Ginger and Cassia, of each, 1½ oz.

Honey enough to form them into a mass.
The dose about 2 oz.

No. 3.

Cummin-seeds,
Coriander-seeds,
Caraway-seeds, of each, - 4 oz.
Grains of Paradise, - 1 oz.
Cassia, - - - ½ oz.
Cardamon-seeds and Saffron, of each, - - - 2 dr.
Liquorice, dissolved in white wine 4 oz.

Syrup of Saffron enough to form the mass.
The dose about 2 oz.

No. 4.

Powdered Ginger, -	4 oz.
Oil of Caraways, - -	1 oz.
Liquorice Powder, -	8 oz.

Treacle enough to form the mass.

ALTERATIVES.

These are medicines which produce their effects almost insensibly; the following formulæ will be found efficacious:

ALTERATIVE POWDERS.

No. 1.

Levigated Antimony, -	6 oz.
Flowers of Sulphur, - -	8 oz.

Mix for eight doses.

No. 2.

Powdered Rosin, - -	4 oz.
Nitre, - - -	3 oz.
Tartarized Antimony, -	1 oz.

Mix for eight doses.

No. 3.

Unwashed Calx of Antimony,	2 oz.
Calomel, - -	2 dr.
Powdered Anise-seeds, -	4 oz.

Mix for eight doses.

Should a Ball be thought more convenient than a Powder, the change may be easily made by the addition of Syrup and Linseed Powder.

CHRONIC COUGH.

We have already noticed this complaint as one of the symptoms of a cold, but did not at that time give any particular directions for its treatment, because it generally ceases as soon as its *cause* (the cold) is removed. It sometimes happens, however, that the Cough continues, although every other symptom is gone off.—This complaint, which from its long continuance is distinguished by the term *Chronic*, may be readily accounted for, when it is recollected that what is called a cold, consists in an inflammation of the Membrane which lines the Nose and Throat; that this Membrane also forms the internal surface of the Windpipe and its branches. When the cold, therefore, has

been violent and improperly treated, the inflammation is liable to extend to the Windpipe, or even to its branches, causing an effusion of coagulable lymph from the Membrane, which proves a constant source of irritation. It is probable also that the inflammation may sometimes render the Membrane so very irritable, or so alter its secretion, as to keep up a constant irritation and cough, without any effusion having taken place. When a considerable quantity of coagulable lymph has been effused, it obstructs the passage of the air in respiration in some degree, causing that sonorous kind of breathing which is termed *thickness of wind* or *roaring*. A Blister to the Throat has sometimes been found useful in the Chronic Cough. One of the following Alteratives Balls is to be given every morning, until moderate purging is produced, and this, if assisted by proper attention to exercise, diet, and grooming, has often effected a cure.

The Chronic Cough is frequently occasioned by Worms in the Bowels or Stomach, and is then to be treated accordingly (See Worms).

BALLS.

No. 1.

Succotrine Aloes, -	1 dr. to 2 dr.
Castile Soap, - - -	2 dr.
Tartarized Antimony, -	2 dr.

Syrup enough to form the Ball for one dose.

Should the disease not submit to this remedy, try the following:

Gum Ammoniacum, -	3 dr.
Powdered Squills and Opium, of each	1 dr.
Camphor, - - -	2 dr.

Syrup enough to form the Ball for one dose.

This is to be given every morning, and continued five or six days. A stable, properly ventilated, should be chosen, and the vapours of foul litter carefully avoided.

LAXATIVES.

This term is applied to opening medicines, that operate very mildly, and produce so gentle a stimulus upon the intestine, as merely to hasten the expulsion of their present contents, without increasing their secretions. Castor Oil seems to be the best medicine of this kind,

though the Oil of Olives and Linseed will produce nearly the same effect; the dose of the former is about a pint, but the latter may be given to a pint and half. When a Laxative Ball is required, the following will be found useful:

Succotrine Aloes,	- -	½ oz.
Castile Soap,	- - -	3 dr.

Syrup enough to form the Ball for one dose.

BLISTERS.

Previous to the application of a Blister, the hair should be cut from the part as closely as possible, the Blistering Ointment is to be well rubbed on it, and afterwards a small quantity is to be spread over the part with a warm knife. When the Blister begins to operate, Horses are very apt to bite the part, which, if suffered, might produce a permanent blemish; it is necessary therefore to guard against this accident by putting what is termed a cradle about his neck, or by tying him up to the rack. When the Legs are blistered, the litter is to be entirely swept away, as the straw might irritate the blistered parts.

BLISTERING OINTMENT.

No. 1.

Spanish Flies, powdered,	½ oz.
Oil of Turpentine, -	1 oz.
Ointment of Wax or Hog's Lard	4 oz.

Mix.

No. 2.

Oil of Turpentine, - -	1 oz.

To which add gradually,

Vitriolic Acid, - -	2 dr.
Hog's Lard, - -	4 oz.
Spanish Flies, powdered,	1 oz.

Mix.

No. 3.

Common Tar, - -	4 oz.
Vitriolic Acid, - -	2 dr.
Oil of Origanum, - -	½ oz.
Hog's Lard, - -	2 oz.
Spanish Flies, powdered,	1½ or 2 oz.

Mix.

Remark.—The Blister, No. 3, is remarkably useful in removing enlargements of the back Sinews or Windgalls. Sublimate is often recommended as an ingredient in Blisters, but it is very apt to *ulcerate* the skin, and leave a

permanent mark or blemish; I have therefore omitted it in the above formulæ, but in cases of Bone Spavin, in which severe blistering is necessary, it may be employed with advantage.

CONDITION.

By the term *Condition* is to be understood, not only a fat and sleek appearance in a Horse, it implies also a proper degree of vigour, by which he is enabled to perform extraordinary labour, without being too much fatigued.—Every defect with respect to condition must originate either in *disease* or in bad *grooming*.—Under the latter head must be comprehended feeding, exercise, and the general management of the stable; the former will include various disorders, which will be concisely described, and the most effectual means pointed out for their removal.

In treating of the Anatomy and Physiology of the internal Organs, an explanation has been given of that curious process by which the body is nourished, and enabled to perform its various functions with regularity: from thence it will appear that the following circumstances are necessary to produce that degree of vigour and

general healthiness of appearance which constitute good condition.

1st. That there is no impediment to mastication.—It sometimes happens that the molar Teeth or Grinders wear so irregularly as to have sharp edges, by which the inside of the Cheek is wounded: the pain which the act of chewing occasions in this case, induces the Horse to swallow some part of his food unbroken, which being difficult of digestion, frequently passes through the body unchanged; this defect is particularly inconvenient in Horses that are separated from others by *bails* only, as in Barracks, their more active neighbours having an opportunity of sharing their allowance. This complaint may be removed by rasping down the sharp edges of the teeth, (for which purpose there are files made, by Veterinary Instrument makers*) and by applying to the wounded cheek, the following mixture.

Powdered Alum, - -	1 oz.
Honey, - -	2 oz.
Vitriolic Acid, (strong)	12 drops.
Infusion of Roses, -	8 oz.

Mix.

* Veterinary Instruments of every kind are made by Mr. Long, corner of Red Lion Street, Holborn, London.

It will be necessary, until this defect is completely removed, to give the Horse broken corn, which will be easily digested.

When young Horses are cutting their Teeth, the Mouth sometimes becomes inflamed and tender; this is another circumstance which may impede mastication, but is easily removed by scarifying the inflamed parts and washing them frequently with the above mixture. Should a slight degree of fever supervene, bleed moderately, and give a dose of the Fever powder.—The corn which is given should be either softened by steeping it in boiling water, or be broken in a mill.

The Lampas is said to be another impediment to feeding (see Lampas), and are therefore removed with a red hot iron. This operation is certainly performed much oftener than is necessary.

2d. That the saliva which is formed in the Mouth passes into the Stomach: this juice being designed by nature to assist the Stomach in its office of digestion. Horses that have acquired the vicious habit termed *crib-biting*, suffer great inconvenience from the waste of saliva which it occasions, the Stomach being in great measure deprived of this liquid, performs its functions imperfectly; hence arise Flatulent

Cholic or Gripes, general emaciation and debility. The remedy commonly employed is a leather strap, buckled tight round the neck immediately beneath the Jaw; this, however, is seldom effectual; a better method is to cover the edge of the manger, and every other part he can lay hold of, with sheep skins, (the wool side outward) until the habit is destroyed. There are other causes by which the energy of the Stomach may be impaired; among these are excessive fatigue, bad food, defect in respiration or breathing foul air, taking too much food or water at once, or at an improper time, Bots, Fever, in short, the Stomach is so important an organ in the animal system, that scarcely any part can be materially injured without affecting it in some degree; and whenever the Stomach is hurt, the whole system seems to sympathize and partake the injury.

Weakness of the Stomach is sometimes very easily cured, the powers of nature indeed are often capable of restoring its tone; at others we find the disease extremely obstinate, resisting the most powerful medicines. This difference depends upon the variety in the *causes* by which the weakness is induced. When it arises from loading the Stomach with improper food, that contains scarcely any nutriment, such as

straw, and where the Horse has been fed in this way for a considerable time, the diet should be gradually changed to one more nutritious. During the time we are making this alteration it is generally necessary to give one or two doses of laxative medicine, joined with aromatics (see Laxatives), to prevent any inflammatory affection of the Eyes, Lungs, or Heels, or, according to the more fashionable language of Grooms, to prevent *humours* from breaking out. Should the appetite appear deficient, the Cordial Ball will be found of great service, given occasionally. When excessive fatigue is the cause of the weakness, which we often find after a hard day's run with the hounds, nothing is so effectual as the Cordial Ball, particularly in old Horses; it soon gives them an appetite, and renders them fit for work again much sooner than they would otherwise be. Where a speedy effect is required, the Ball may be mixed with a pint of good beer or ale.

If a Horse, after sweating from exercise or any other cause, is allowed to drink freely of cold water, the Stomach is suddenly debilitated, and the whole system is frequently affected in consequence; hence arise Flatulent Cholic, suppression of Urine, shivering, quick Pulse, and other symptoms of fever, (for the remedies in

this case see Flatulent Cholic, suppression of Urine, and Fever.)

The Stomach sometimes becomes weak gradually, and without any apparent cause; this is first indicated by the appetite failing, which is soon followed by general debility, emaciation, and unhealthy looking coat. The most effectual remedies in this case are the Tonic Balls and a nutritious diet; the corn should be given more frequently than usual, but in small quantities; a little malt on those occasions is extremely useful. The stable should be well ventilated, but not cold; regular exercise will also be very beneficial, and should never be omitted. It should be understood, however, that although exercise tends to promote *strength*, if carried beyond the animal's power, it becomes a cause of debility: it is highly necessary, therefore, when a Horse is in a state of weakness, to take care that his exercise is but moderate.

Worms in the Stomach and Bowels are a frequent cause of leanness and debility in Horses, and while they exist, every exertion to promote condition will be ineffectual (see Worms).

3d. That there is no defect in the organs of respiration. If the Blood is not duly supplied with that vivifying principle, which is derived from the air by breathing, a greater or less de-

gree of debility must be the consequence; hence a want of tone is always observable in the Stomach and Bowels of broken-winded Horses, as well as a deficiency in the muscular power in general. The same evils will result from keeping a Horse in too close a stable, where the air does not contain the usual proportion of this principle.

4th. That the Liver and Pancreas are healthy, and that there is no obstruction in the tubes by which their respective juices are conveyed to the Intestines. The Liver is very subject to disease, particularly Inflammation (see Inflammation of the Liver); it may also have an unusual quantity of Blood determined to it, whereby its action or secretion will be increased. This generally causes a purging and a yellowness of the Eyes and Mouth (see Jaundice.

It is very probable that the internal surface of the Intestines may sometimes be so loaded with mucus, that the mouths of the *Lacteals* are in some measure plugged up, and rendered incapable of absorbing a sufficient quantity of nutriment or *Chyle*. A dose of physic in this case is the best remedy.

Having described those diseases which most commonly prevent Horses from acquiring *condition*, I shall endeavour to point out the best

method of promoting it in such as are in other respects healthy. A good stable being essentially necessary to this purpose, I shall beg leave to offer a few observations on that head.

ON THE STABLE.

In building a stable there is no circumstance more deserving attention, or that is more generally neglected than ventilation; the most convenient method of doing this is to have several apertures in the cieling, so contrived that they may be occasionally shut; this will effectually prevent the air from becoming impure, and will enable us in some measure to regulate the temperature of the Stable.

The Stalls should be of sufficient width to allow the Horse to turn freely; narrow Stalls are not only very inconvenient, but have sometimes occasioned dangerous diseases of the Spine.

The Floor should be made of hard brick, and nearly level, very little declivity being sufficient to drain off the urine, or the drain may be made in the middle of the Stall, and then the front and back part may be on a level.—The common method of making the back part considerably lower than the front, is certainly very improper. When a Horse stands in this

way the Muscles and Ligaments of the hind Legs are kept constantly on the stretch in some degree, frequently producing a swelling of the Legs; the same objection may be urged against paving the Floor with large pebbles, on which the Feet would have an unequal bearing, and their Ligaments would consequently be put upon the stretch.

The method of separating Horses by means of *Bails*, which is adopted in Barrack Stables, appears to be injudicious, and if we calculate the accidents and inconvenience which arise from it, *Stalls* will be found a better method, both with respect to œconomy and convenience. Among the evils attending the former mode, may be reckoned the facility with which contagious diseases are communicated, the frequent accidents that arise from kicking or biting, or from getting over or under the *Bail*. I once saw a Horse break his back by attempting to rise suddenly while under the Bail. If a Horse happens to be a slow feeder, his neighbours have an opportunity of assisting him. To this may be added the disturbance to which a Horse is liable, and the difficulty with which he lies down.

Dark Stables are very injurious to the Eyes, the Windows therefore should be larger than they are commonly made.

There is a neatness and advantage in having the Manger made so as to slide into the wall, like a drawer, and an iron rack is preferable to one of wood ; by this contrivance they may be more easily kept clean, and the Horse will not be so liable to acquire the vice of *crib-biting*.—Horses should not be suffered to stand on their litter during the day, unless they have undergone considerable labour ; the stimulating vapours, which constantly exhale from it, being injurious to the Eyes and Lungs ; it tends also to produce in the Hoof a disposition to contract : it would be adviseable, particularly in Barrack Stables, to remove the litter every morning, and expose it during the day to the air ; the moisture and stimulating vapours would be completely dissipated by the evening, and it would be nearly as useful as fresh straw. Another advantage arising from this plan is, that a Horse would have but little opportunity to eat his litter, which they are frequently inclined to do when stinted in hay. The quantity of litter which some Horses eat during the day, when their allowance of hay is only 12lb. in twenty-four hours, is productive of much mischief; it certainly oppresses the Stomach, and weakens its digestive power ; it tends also to injure the

Wind, without affording the smallest quantity of nutriment. Though ventilation is of the utmost importance in a Stable, the Horse should never be exposed to a current of air.—Heat, in a moderate degree, is certainly congenial to the constitution of the Horse, and contributes to the promotion of condition; warm cloathing therefore during the winter is strongly to be recommended. The cloathing commonly used in the army is by far too thin and scanty, and might be greatly improved at a small expence.

When a Horse is brought in from exercise he should not only have his Feet cleaned out with a picker, but it is necessary also to wash them well with a brush and water; this will effectually remove all dirt and gravel, and serve likewise to cool and moisten the Hoofs. In summer it is adviseable to stop the Feet as it is termed; that is, to keep a mixture of soft clay and cow-dung constantly applied to the Soles while the Horse is in the Stable; this will prevent them from becoming too dry, and losing their elasticity; with the same view Horses should always be watered at a pond in hot and dry weather, the moisture which the Hoofs receive in this way, will frequently prevent those sand-cracks and lamenesses which are so apt to occur in the hot

months of summer. In winter, cold water is injurious to the Heels, and tends to bring on Swelling and Grease; in cold weather therefore Horses should be always watered in the Stable.

FEEDING AND EXERCISE.

This is a subject of considerable importance, and requires more attention than is commonly paid to it; since by a judicious management in this respect, many troublesome diseases may be prevented.

When a Horse is in a state of nature, and using only voluntary exercise, there cannot be a doubt that the food which nature provides for him is perfectly sufficient for his support, and better calculated than any other to keep him in health; but when he is employed in the various labours in which he is found so essentially useful, it becomes necessary to adapt the quantity and quality of his food to the exercise he has to perform; for example, if a Horse, whose work consisted merely in being walked out for an hour every day, were to be fed daily with a peck of oats, and an unlimited quantity of hay, he would in all probability become full of humours, according to the language of grooms,

and some troublesome disease, either of the Lungs, Eyes, or Heels, would be the consequence; but if one that performs the hard labour of a post Horse were to be kept on such allowance, he would soon lose flesh, and become inadequate to his work. When we undertake, therefore, to get a Horse into condition, it is necessary to enquire what kind of work he is designed for, as it is by this circumstance that his feeding and exercise are to be regulated. It is a fact, not sufficiently known perhaps, that the strength of an animal, or any particular part of an animal, may be increased to a considerable degree by means of exercise properly conducted. Thus we find that the arms of a Waterman are particularly large and strong from frequent exertion of its muscles; and the same may be observed of the legs of a Porter, who is almost constantly employed in carrying heavy burthens. In like manner, a Horse, by means of exercise gradually increased, and proper feeding, may have his strength brought to the highest degree of perfection of which it is capable.

It is a very common practice, and thought by many to be indispensibly necessary, to give a Horse three doses of physic, in order to train him for the field, or to bring him into high

condition. I am convinced, however, that this practice frequently does mischief, and it has been proved that a Horse's wind and strength may be made as perfect as possible, merely by proper management in feeding and exercise.

With respect to the food most proper for Horses, oats and hay are certainly the best. Beans appear to dispose the body to inflammatory complaints, unless this effect is counteracted by a considerable degree of exercise; they should be given only to such Horses as work very hard, and then they will be found a very invigorating and nutritious diet.

It is very useful in Spring and Summer to give a Horse now and then some fresh succulent vegetables, such as carrots, lucerne, &c.

To a Horse that works moderately, a peck of oats and 12 or 14 pounds of hay are, I think, a sufficient allowance for twenty-four hours.—If at any time he is required to perform more work than usual, there should be a proportionate increase in the quantity of oats, or perhaps it will be better to make an addition of a quart of beans to his usual allowance; but the above quantity of hay will on all occasions be sufficient.

It is supposed that some advantage is obtained by mixing cut straw with a Horse's corn, from its making him masticate more perfectly than he otherwise would. When a Horse feeds too greedily, it may be useful, though clover-hay is preferable to straw for this purpose: but when imperfect mastication arises from soreness on the inside of the Cheeks or Gums, it is more likely to do harm than good.

Those who have paid most attention to the effects of different kinds of water upon Horses, are of opinion that pond water is to be prefered, where the bottom is composed of chalk and clay, and the water generally turbid, and of a whitish colour. It has been asserted also by persons of considerable experience, that without *good* water it is difficult, and often impossible to bring a Horse into high condition. I am inclined to believe, however, that many of those effects which have been ascribed to the injurious qualities of water, from the impurities it may contain, have depended upon its low temperature or coldness; in *Summer* I have observed that the water taken from wells will sometimes produce Gripes and other bad effects, whereas the same kind of water, in *Winter*, has, as far as my experience goes, been used

without inconvenience. If this observation be correct, it will appear that the bad qualities of the water during Summer, arose from its coldness, for in Summer well water is considerably colder than that which is exposed to the air, whereas in Winter it is much warmer.

I think a Horse should not be stinted too much in water, particularly in Summer ; many Horses, I believe, are injured in this way, but they should not be allowed to drink too much at one time.

The hours of feeding should be regularly observed, and never deviated from if it can be avoided, and during the time he is feeding, the stable should be kept perfectly quiet.

To a Horse that does no work, two or three hours exercise every day is necessary to his health and condition. When a Horse is to be prepared for the road, and is intended for moderate riding, his exercise may be confined to walking; but if he is designed for fast riding or for hunting, he must be gradually accustomed to that velocity of motion for which he is want; it is in this way only that his wind can be brought to perfection.

Horses are very liable to be injured by too sudden a change of temperature; this has been

often evinced by bringing them too hastily from grass or camp into warm stables, many fatal diseases having been produced by it; on those occasions, therefore the most open stables should be chosen at first, and the diet should consist of hay and bran. After a few days a small quantity of oats may be given, and the stable made a little warmer. He may thus be brought gradually to usual diet and temperature. If, during this time, any symptoms of inflammation make their appearance, such as cough, inflamed Eyes, quickness of breathing, swelling of the Legs, &c. he should be immediately bled, and next morning take a Laxative Ball. Were these precautions more attended to than they are, many fatal diseases might be prevented. It is a very common practice to give three doses of physic after taking a Horse from grass, for the purpose, it is said, of expelling the humours that have accumulated in the body; I am persuaded that moderate purging on this oscasion is very beneficial; but the physic commonly given is so very strong, that some Horses are absolutely destroyed by it, and many are so debilitated as to receive very material injury from the practice. The intention of physicing a Horse after grass, is to give him

strength and condition as speedily as possible, how this is to be accomplished by such profuse evacuations as those unfortunate animals are sometimes obliged to undergo, I cannot conceive.

From the press of Wm. Bristow, Parade, Canterbury.—1802.